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ROLE-WISHES AND GENERAL WISHES OF CHILDREN AND ADOLESCENTS

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Wishing is a favorite pastime in our culture and is allowed considerable latitude. Children are permitted, even encouraged, to make and express wishes beyond the limits of allowable actions and demands, and beyond the limits of probable attainment. Wishes are goal-directed and express values. They indicate areas of dissatisfaction and levels of aspiration in the life-space of the wisher. They constitute an as yet insufficiently exploited resource for knowledge of child and adolescent development.

Most studies of children's wishes have been based on an essentially unstructured form of request in obtaining responses. The child is asked, in somewhat varying ways, to state what he would wish if his wishes could come true. In general, the analysis of responses has shown a high frequency of wishes for material objects and possessions, decreasing with age and being replaced by wishes for more general and inclusive benefits for self and others; a tendency for wishes to be predominantly extrovert rather than introvert, with a low incidence of wishes relating to personal shortcomings (4, 5); and a tendency for wishes to be concrete and realistic rather than abstract and unrealistic, but becoming more general with increasing age (4, 5, 9, 10, 11). Sex differences have been found indicating a higher interest among boys in personal achievement and possessions, and among girls in social and family relationships (4, 11).

It may be suspected, however, that wish responses are influenced by the form of request and by conditions under which responses are obtained. Boynton (1) and Gray (2), for example, asked the children what they would ask for if they could "have anything they wanted." The responses were overwhelmingly in terms of material objects and possessions. Children's birthday wishes for their friends were collected by Wilson (6, 7), who interpreted these as projected wishes for self. His findings yielded significantly higher frequencies of wishes relating to vocations, activities and general benefits for self and fewer wishes for specific objects and possessions than were obtained from comparable groups in other studies (e.g., see Jersild, 4). Furthermore, the low frequency of some responses (e.g., relief from personal shortcomings, to be smarter, better looking, etc.) may not be indicative of the strength of these interests, but a function of the form of the request. This might hold in general with respect to the intro-

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version-extroversion ratio of wishes. Other variables might include the mode of response, whether oral or written, and the degree of subject anonymity.

PROCEDURE

The present paper reports some results of a pilot application of a method of securing and classifying samples of wishes by older children and adolescents in which the reference of the wish is varied and the form of wish expression is also varied in relation to the area of reference.

Wish samples were obtained from 1809 public school pupils from the fourth through the twelfth grades in Sioux Falls and Vermillion, South Dakota. Comparable numbers of males and females from the various grades were included. For the present report, the grades were grouped in the following way: elementary grades 4, 5, 6, in which both sexes are predominantly prepubescent; junior high school grades 7 and 8, where girls are predominantly pubescent; high school grades 9 through 12, where boys also become predominantly pubescent.

Instead of asking the children simply to state what they most wished for, a sheet was prepared consisting of the following 24 open-ended statements directed towards salient areas of personal and interpersonal experience:

- | | |
|------------------------------------|--|
| 1. I wish I were | 13. I wish our home were |
| 2. I wish I were not | 14. I wish our home were not |
| 3. I wish I could | 15. I wish my brother(s) |
| 4. I wish I did not | 16. I wish my sisters(s) |
| 5. I wish I had | 17. I wish my teacher(s) were |
| 6. I wish my folks were | 18. I wish my teacher(s) would |
| 7. I wish my folks would | 19. I wish my teacher(s) did not |
| 8. I wish my mother would | 20. I wish friends |
| 9. I wish my mother did not | 21. I wish my girl friends |
| 10. I wish my father would | 22. I wish my boy friends |
| 11. I wish my father did not | 23. I wish my best friend |
| 12. I wish my family lived | 24. I wish more than <i>anything</i> that .. |

These statements were completed by the subjects under the direction of their own previously instructed classroom teachers. Instructions to the teachers emphasized permissiveness and anonymity as means of securing candid responses. Supplementary data identified only the sex, age, grade and school of the respondent. Teachers were asked to report on the apparent attitudes of the children towards the task.

In tabulating responses, erasures were restored and used wherever possible, on the assumption that they would, in most instances, represent suppressed primary wishes. How many other primary wishes may have been suppressed cannot, of course, be known. Reports of teachers with respect to the subjects' manifest attitudes, however, together with internal evidence,

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leaves little doubt that the vast preponderance of responses were seriously made. Not all items were completed by all subjects, and some subjects expressed more than one wish on a specific item.

FINDINGS

The first phase of analysis of the obtained material consisted of classification with respect to content, item by item, with computation of frequency distributions and comparison of sex and grade groups. We present here some findings from the content-classification of two wish items: Item 1, "I wish I were . . .," and Item 24, "I wish more than *anything* that . . .". The former constitutes a self-directed wish the form of which presumably places emphasis upon role; the latter is unstructured and is equivalent to the instruction most frequently used by previous investigators.

Responses to the item "I wish I were . . ." numbered 1806 separate wishes, 837 from 775 boys, 969 from 864 girls. The item was left blank by 91 boys and 76 girls. There was a total of 167 second or third wishes which are included in the following computations. Sorting yielded 46 content categories, grouped under nine general reference headings. Table 1 gives the percentage distribution for boys and girls in each grade group in order of total frequencies in gross categories for all subjects combined.

Rank-order correlations between boys and girls and between grade groups for relative frequencies shown in Table 1 on both content and general reference categories were positive and significant in all cases. With one

TABLE 1

PERCENTAGE DISTRIBUTIONS OF RESPONSES BY GRADE-GROUP AND SEX ON ITEM 1: "I WISH I WERE . . ."

Classification	N =	Elementary		Junior High		High School		All Grades	
		Male	Female	Male	Female	Male	Female	Male	Female
		240	259	358	381	239	329	837	969
I. <i>Personal Achievement</i>		40.4	28.2	38.0	17.8	39.8	22.5	39.2	22.2
1. Athletic Career		2.0	0	2.5	.5	3.4	.3	2.6	.3
2. Professional Career		5.4	15.5	3.1	7.6	7.5	5.2	5.0	8.9
3. Religious Career . . . . .		.4	.8	.3	.8	0	.3	.2	.6
4. Business Career		1.3	0	.8	0	2.5	.3	1.4	.1
5. Artisan Career		3.3	1.6	4.2	1.6	1.3	4.6	3.1	2.6
6. Action-Daring Career		13.8	2.3	10.6	1.6	6.8	2.1	10.4	1.9
7. Theatric Career		1.3	3.9	1.1	1.0	1.2	2.7	1.2	2.4
8. Farm Career		3.3	0	3.1	.3	5.4	0	3.8	.1
9. Artist Career		1.7	1.9	1.4	1.8	.4	1.8	1.2	1.9
10. Misc. Vocation		0	0	0	0	.8	.9	.2	.3
11. Earn More		0	.4	2.0	1.3	3.8	4.3	1.9	2.0
12. Better in Sports		7.9	1.9	8.9	1.3	6.7	0	8.0	1.0

(table continued on next page)

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TABLE 1 — *continued*

Classification	N=	Elementary		Junior High		High School		All Grades	
		Male	Female	Male	Female	Male	Female	Male	Female
		240	259	358	381	239	329	837	969
II. <i>School</i>	15.4	15.8	22.9	26.3	21.3	23.4	20.3	22.5	
13. Out of School	3.7	1.9	5.0	4.7	10.0	9.1	6.1	5.5	
14. Higher Grade	1.7	4.2	6.1	6.1	2.9	5.5	3.9	5.4	
15. Smarter	7.9	6.2	10.1	13.1	7.1	8.2	8.6	9.6	
16. Special Activity	1.7	3.1	1.4	2.1	.4	0	1.2	1.6	
17. Miscellaneous School .....	.4	.4	.3	.3	.9	.6	.5	.4	
III. <i>Personal-Social Relations</i> ..	9.2	14.7	5.3	16.5	15.1	27.4	9.2	19.7	
18. Morally Better	5.0	6.2	3.1	2.9	3.3	4.0	3.7	4.1	
19. Religiously Better	0	.4	.3	0	1.7	.9	.6	.4	
20. Happier .....	.4	.8	0	.5	1.3	1.5	.5	.9	
21. More Popular	2.1	2.3	.6	7.9	3.8	7.9	1.9	6.4	
22. Socially at Ease	0	.8	.6	1.6	.9	3.7	.5	2.1	
23. Independent	1.3	1.2	.6	1.0	0	.6	.6	.9	
24. Better Personality .....	.4	0	.3	1.8	2.1	3.3	.8	1.9	
25. Love, Marriage	0	2.7	0	.5	1.3	4.3	.4	2.4	
26. Misc. Personal-Social	0	.4	0	.3	.8	1.2	.2	.6	
IV. <i>Physical Appearance</i>	4.2	10.8	10.6	17.1	5.0	10.0	7.2	13.0	
27. Smaller .....	.8	2.7	0	4.5	0	3.0	.2	3.5	
28. Bigger	2.1	2.3	7.8	3.9	3.0	1.2	4.8	2.6	
29. Better Looking .....	.4	5.4	.6	7.4	1.2	5.8	.7	6.3	
30. Healthier .....	.4	.4	1.4	.3	.4	0	.8	.2	
31. Misc. Phys. Appearance ..	.4	0	.8	1.0	.4	0	.6	.4	
V. <i>Age</i>	7.5	9.3	10.1	10.7	5.0	5.8	7.9	8.7	
32. Older	6.7	8.9	9.8	9.9	4.1	5.5	7.3	8.2	
33. Younger .....	.8	.4	.3	.8	.9	.3	.6	.5	
VI. <i>Identity</i>	7.9	11.2	2.2	5.8	2.9	3.7	4.1	6.5	
34. Same as I Am	2.5	3.9	.6	1.1	1.7	.9	1.4	1.8	
35. Dead .....	.4	.4	0	0	.4	0	.2	.1	
36. Different Sex .....	.8	2.7	0	3.9	0	2.1	.2	3.0	
37. Different Species	2.9	1.2	.6	0	0	0	1.1	.3	
38. Specific Person	0	1.5	.8	.5	.4	.6	.5	.8	
39. Imaginary .....	.4	1.2	.3	0	.4	0	.4	.3	
40. Misc. Identity .....	.8	.4	0	.3	0	0	.2	.2	
VII. <i>Living Situation</i>	7.5	7.3	5.0	3.1	4.2	3.9	5.5	4.5	
41. At Home	1.3	1.5	1.4	1.0	.4	.3	1.1	.9	
42. Other State, Town	3.3	3.1	1.4	1.8	2.9	2.7	2.4	2.5	
43. On Farm	1.3	.8	1.7	0	0	0	1.1	.2	
44. Misc. Living Situation	1.7	1.9	.6	.3	.8	.9	.9	.9	
VIII. <i>Possessions</i>	4.6	.4	2.5	1.3	5.8	2.1	4.1	1.3	
45. Rich	4.6	.4	2.5	1.3	5.8	2.1	4.1	1.3	
IX. <i>Unclassified</i>	3.3	2.3	3.4	1.3	.8	1.2	2.6	1.6	
46. Unintelligible, Irrelevant, Flippant	3.3	2.3	3.4	1.3	.8	1.2	2.6	1.6	

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exception, *rho*'s were higher in the general reference than in the specific content categories for compared groups. The coefficients of correlation are reported in Table 2.

Comparing the distributions by *chi-square*, however, yielded highly significant sex and grade differences in the frequencies of specific categories. Boys consistently wished for personal achievement and possessions (in this case, to be rich) more frequently than did girls; while girls' wishes consistently fell into the personal-social, physical appearance and identity categories more frequently than those of the boys. Both boys and girls showed a peak of wishes relating to school, physical appearance and age during the junior high period, subsequently declining in high school; personal achievement and identity were highest in the elementary group, while personal-social relations achieved their greatest importance in high school.

On specific content categories, boys and girls equally wished they were smarter, older, out of school and morally better, in that order of frequency. Boys, more than girls, wished they were in an action-daring career, excelled in sports, were bigger, and rich. Girls, more than boys, wished they were in a professional career (nurse, teacher), in a higher school grade, more

TABLE 2
RANK-ORDER CORRELATIONS OF SEX AND GRADE-GROUPS IN
FREQUENCIES OF WISH CLASSIFICATIONS, ITEM 1

	Content Categories (N = 46)	General Reference Categories (N = 9)
<i>Male-Female</i>		
Elementary .....	.49	.86
Junior High .....	.49	.86
High School .....	.53	.76
All Grade Groups .....	.44	.91
<i>Grade Groups</i>		
Male:		
Elementary-Junior High ....	.76	.49
Junior High-High School ....	.62	.71
Elementary-High School ....	.54	.72
Female:		
Elementary-Junior High ....	.70	.90
Junior High-High School ....	.75	.88
Elementary-High School ....	.57	.82
Total:		
Elementary-Junior High77	.84
Junior High-High School71	.92
Elementary-High School54	.85

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popular, better looking, shorter or slimmer, and were of the opposite sex. With increasing age, both boys and girls increasingly wished to be out of school, and increasingly wanted to earn money, but were less concerned to be older and bigger when they reached high school. Girls increasingly desired social popularity, social ease and better personality; they were decreasingly interested in a professional career, but, in high school, were more inclined to want jobs as clerks and stenographers. Boys became more concerned with social acceptance, less interested in being of a different species, less interested in an action-daring career and more interested in a professional one. All reported differences were significant at the 5 per cent level or beyond when tested by *chi-square*.

The responses to Item 24, "I wish more than *anything* that . . .," were far more diversified than those for Item 1. 1927 separate wishes were obtained on this item, 876 from 717 boys, 1053 from 835 girls; 149 boys and 105 girls left this item blank, and there was a total of 375 second or third wishes. Sorting yielded a total of 86 content categories, grouped under eleven general reference headings. These, with percentage distributions for boys and girls of all grade groups, are listed in Table 3, in order of total frequency of gross categories for all subjects summed.

TABLE 3
PERCENTAGE DISTRIBUTIONS OF RESPONSES BY GRADE-GROUP AND SEX
ON ITEM 24: "I WISH MORE THAN *ANYTHING* THAT . . ."

Classification	N=	Elementary		Junior High		High School		All Grades	
		Male	Female	Male	Female	Male	Female	Male	Female
		248	284	376	419	250	350	876	1053
I. <i>Personal Achievement</i>	15.3	8.5	24.2	14.8	30.0	24.0	23.3	16.2	
1. Successful Life . . . . .	.4	.4	3.2	2.4	10.4	6.7	4.5	3.3	
2. Business Career . . . . .	.4	0	.5	.5	0	0	.3	.2	
3. Professional Career	2.4	3.1	2.4	4.5	2.4	3.7	2.4	4.0	
4. Art Career	2.4	.7	.5	1.7	.4	1.4	1.0	1.3	
5. Farm Career . . . . .	.4	0	1.1	0	2.4	.9	1.3	.3	
6. Home Career	0	0	0	0	0	1.7	0	.6	
7. Religious Career . . . . .	.8	.4	0	.5	.4	.6	.3	.4	
8. Action-Daring Career	4.4	1.8	4.0	1.4	.4	0	3.1	1.0	
9. Athletic Career . . . . .	.8	0	2.1	0	1.6	0	1.6	0	
10. Miscellaneous Career . . . . .	.4	.7	1.3	.2	1.6	1.4	1.1	.8	
11. Make Money	0	0	.3	0	.4	0	.2	0	
12. Clarity of Future	0	0	0	.7	.8	2.3	.2	1.0	
13. Success in Sports	2.0	1.1	2.7	.7	1.2	0	2.1	.5	
14. Better in Music-Art	0	.3	.5	.5	0	1.4	.2	.8	
15. Have Good Job	0	0	3.7	.7	4.0	3.1	2.9	1.3	
16. Glamorous Activity	0	0	1.3	.7	2.0	0	1.1	.3	
17. Misc. Personal Achiev.8	0	.5	.2	2.0	.6	1.0	.3	

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TABLE 3 — *continued*

Classification	N=	Elementary		Junior High		High School		All Grades	
		Male	Female	Male	Female	Male	Female	Male	Female
		248	284	376	419	250	350	876	1053
II. <i>Personal-Social Relations</i>	12.1	14.1		9.3	17.7	16.8	27.4	12.2	19.9
18. More Popular, Liked	1.2	4.6		3.2	5.5	1.2	5.1	2.0	5.1
19. Independent . . . . .	.4	.7		.3	2.4	1.2	1.4	.6	1.6
20. Withdrawal . . . . .	.8	0		0	.2	0	.3	.2	.2
21. Love, Courtship	2.4	1.8		.5	3.8	1.6	4.3	1.4	3.4
22. Marriage	1.6	1.4		1.3	1.9	6.0	10.6	2.8	4.7
23. Best Friend	2.0	1.4		.5	0	.8	1.7	1.0	.9
24. Morally Better	2.0	2.1		1.6	1.4	.8	1.4	1.5	1.6
25. Religiously Better . . . . .	.4	.7		1.6	2.2	2.0	2.0	1.4	1.7
26. Personal Well Being . . . . .	.8	1.1		.3	.2	1.2	.6	.7	.6
27. Misc. Personal-Social . . . . .	.4	.3		0	0	2.0	0	.7	.1
III. <i>Family</i>	10.1	21.5		10.9	19.6	4.4	12.0	8.8	17.6
28. Not Broken	2.4	3.9		3.2	2.6	.4	2.3	2.2	2.9
29. More Congenial	0	1.1		.5	1.9	.4	1.4	.3	1.5
30. General Well Being	1.6	1.4		.8	1.7	.4	1.4	.9	1.5
31. Financial Security . . . . .	.4	.7		.8	1.9	1.6	.6	.9	1.1
32. Have Sibling . . . . .	.4	6.0		.8	4.8	0	.3	.5	3.6
33. Solicitude Sibling	2.0	2.5		1.3	2.1	0	2.0	1.1	2.2
34. Solicitude Parent	2.8	3.1		2.1	2.9	1.6	3.1	2.2	3.0
35. Reject Family . . . . .	.4	0		.8	.5	0	.3	.5	.3
36. Family Proud of Me	0	.7		.3	0	0	.3	.1	.3
37. Other Relatives, Misc.	0	2.1		.3	1.2	0	.3	.1	1.1
IV. <i>Possessions</i>	22.6	14.4		19.7	8.6	11.6	2.3	18.2	8.1
38. Motor Vehicle	1.2	.7		9.8	1.0	6.8	.6	6.5	.8
39. Bicycle, Skates	3.6	4.2		.8	.7	0	0	1.4	1.4
40. Animal	6.1	6.0		4.3	2.4	0	.3	3.5	2.7
41. Money	4.4	.7		1.6	1.7	4.0	.6	3.1	1.0
42. Gun	2.0	0		2.1	0	.4	0	1.6	0
43. Clothes . . . . .	.4	1.1		0	2.4	.4	0	.2	1.2
44. Sports Equipment	1.2	0		0	.2	0	0	.3	.1
45. Musical Instruments	0	.7		.3	.2	0	.6	.1	.5
46. Electronic Equipment . . . . .	.4	.3		.8	0	0	0	.5	.1
47. Miscellaneous Possessions	3.2	.7		0	0	0	.2	.9	.3
V. <i>School</i>	8.5	5.3		9.8	13.9	12.8	14.6	10.3	11.7
48. Out of School	4.0	2.1		4.0	1.9	1.6	1.4	3.3	1.8
49. Completed	0	0		1.6	2.2	1.6	3.1	1.1	1.9
50. In Higher Grade	0	0		.8	.5	0	.3	.3	.3
51. Go to College . . . . .	.4	.4		0	2.2	6.4	3.4	1.9	2.1
52. Have Special Training	0	.4		.5	0	.4	2.3	.3	.8
53. Special Achievement	1.2	.7		1.6	1.4	2.4	2.3	1.7	1.5
54. Pass Grade . . . . .	.8	0		1.1	3.3	.4	.6	.8	1.5
55. Special Activity8	.4		0	1.4	0	.3	.2	.8
56. In Different School4	.7		.3	0	0	0	.2	.2
57. Miscellaneous School8	.7		0	.9	0	.9	.2	.9

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TABLE 3—continued

Classification	N=	Elementary		Junior High		High School		All Grades	
		Male	Female	Male	Female	Male	Female	Male	Female
		248	284	376	419	250	350	876	1053
VI. <i>Living Situations</i>	14.5	13.4		10.1	12.2	6.8	3.4	10.4	9.6
58. Elsewhere, General .....	.4	.4		0	0	0	.8	.1	.4
59. Live on Farm	4.8	4.2		6.1	2.4	2.0	.3	4.6	2.2
60. Have Better House	4.0	4.2		1.6	4.1	1.2	.8	2.1	3.0
61. Other State or Town	4.4	3.1		1.3	2.9	3.2	.8	2.9	2.3
62. Stay Put	0	0		0	.2	0	0	0	.1
63. At Lake, Resort	0	0		.5	.5	0	0	.2	.2
64. With Relatives .....	.4	0		0	1.0	0	.3	.1	.5
65. Live at Home	0	0		0	.2	0	0	0	.1
66. Have Own Room .....	.4	1.1		.3	.7	0	.3	.2	.6
67. Have Play Space	0	.4		0	.2	0	0	0	.2
68. Misc. Living Situation	0	0		.3	0	.4	0	.2	0
VII. <i>Social Welfare</i>	7.7	10.2		5.1	4.1	13.2	10.9	8.3	8.0
69. Peace	6.5	6.0		4.5	3.1	11.2	9.1	7.2	5.9
70. General Welfare	0	2.8		.3	.5	.4	.9	.2	1.2
71. General Morality .....	.4	.3		0	.2	1.2	.6	.5	.4
72. No Disasters .....	.4	.7		0	.2	0	0	.1	.3
73. Misc. Social Welfare .....	.4	.3		.3	0	.4	.3	.3	.2
VIII. <i>Travel</i>	4.0	4.9		4.3	2.9	.8	1.7	3.2	3.0
74. General Travel	2.0	.7		2.1	1.0	.4	.8	1.6	.8
75. Special Trip	1.6	3.9		1.8	1.9	.4	.8	1.4	2.1
76. Miscellaneous Travel .....	.4	.3		.3	0	0	0	.2	.1
IX. <i>Physical Appearance</i>	1.6	1.8		1.6	3.3	0	1.7	1.1	2.4
77. Stature .....	.4	0		0	1.2	0	0	.1	.5
78. Looks .....	.4	1.1		.3	.5	0	.9	.2	.8
79. Health .....	.8	0		.3	0	0	.6	.3	.2
80. Physical Soundness	0	0		.5	.5	0	0	.2	.2
81. Special Feature	0	.7		.5	1.2	0	.2	.2	.8
X. <i>General Wish</i>	1.2	3.5		2.9	1.4	.4	.9	1.7	1.8
82. Every Wish .....	.4	.3		1.1	.2	0	0	.6	.2
83. Anything I Want .....	.4	2.5		1.3	1.2	.4	.9	.8	1.4
84. All Above Wishes .....	.4	.7		.2	0	0	0	.2	.2
85. Everyone Have Wishes	0	0		.2	0	0	0	.1	0
XI. <i>Unclassified</i>	2.4	2.4		2.1	1.7	3.2	1.1	2.5	1.7
86. Unintelligible, Irrelevant, Flippant	2.4	2.4		2.1	1.7	3.2	1.1	2.5	1.7

It will be noted that the categories of identity and age, present in Item 1, are missing here, and that we have added family, travel and general wish. Personal achievement is still at the top, but the frequency is lower, particularly for boys; personal-social relations are now in second place with a slightly higher frequency; possessions have now become a strong factor,

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school is in fifth place rather than second, while physical appearance is near the bottom of the list.

As in Item 1, rank-order correlations for subgroups, reported in Table 4, were positive and significant, but distributions in specific categories differed significantly when tested by *chi-square*.

TABLE 4
RANK-ORDER CORRELATIONS OF SEX AND GRADE-GROUPS IN
FREQUENCIES OF WISH CLASSIFICATIONS, ITEM 24

	Content Categories (N = 86)	General Reference Categories (N = 11)
<i>Male-Female</i>		
Elementary .....	.61	.79
Junior High .....	.54	.75
High School .....	.57	.86
All Grade Groups .....	.64	.77
<i>Grade Groups</i>		
Male:		
Elementary-Junior High ....	.55	.92
Junior High-High School ...	.59	.69
Elementary-High School ....	.42	.73
Female:		
Elementary-Junior High ....	.63	.75
Junior High-High School ...	.57	.92
Elementary-High School ....	.41	.62
Total:		
Elementary-Junior High ....	.62	.82
Junior High-High School ...	.59	.78
Elementary-High School ....	.36	.57

In all grade-groups and over-all, girls exceeded boys in wishes relating to family, and, in junior high and high school and over-all, in personal-social wishes. Boys exceeded girls in elementary and junior high and over-all in wishes relating to personal achievement, and, in all grade-groups, in wishes for possessions. Sex differences in these four categories were most marked in the junior high grades. The differences in these categories were, with two exceptions, all beyond the .1 per cent level of confidence. There were no significant sex differences on any other general categories.

Both boys and girls showed, with increasing age, an increase in wishes relating to personal achievement, personal-social relations and school; a decrease in wishes relating to family, possessions, living situation and travel. Interest in social welfare fell off in the junior high group but rose markedly

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in high school. The magnitude of these changes was in general higher for girls than for boys.

In terms of specific content categories, the responses on the Item "I wish more than *anything* that . . ." were widely dispersed. The most frequent single wish for both boys and girls was the wish for peace, with 6.49 per cent of the total. Boys and girls equally wished for a successful life, a professional career, an animal pet, the welfare of parents, a better house to live in, and an unbroken home, in that order. Boys, more than girls, wanted to have a car, live on a farm, be out of school, have a good job, have an action-daring career, lots of money, and excel in sports. Girls, more than boys, wished for marriage, social acceptance, a boy friend, a sibling, a more congenial family. With increasing age, both boys and girls more frequently wished for a successful life, marriage, to go to college, or to have a good job; and less frequently to live on a farm, have a pet, or have a bicycle or skates. Boys increasingly wished for a car, decreasingly for an action-daring career or miscellaneous possessions; while girls wished increasingly for clarity of the future or special forms of training and decreasingly for a sibling or to live in a better house. In general, more change was noted for both sexes between junior high and high school than between elementary and junior high. All reported differences were at or beyond the 5 per cent level of confidence when tested by *chi-square*.

SUMMARY

In summary, as indicated by both Items 1 and 24, there is a high degree of similarity in the frequency distribution of wishes among general reference categories and somewhat less so among specific content categories for both sexes and all three grade-groups.

There are, however, highly significant sex differences within the general similarity, boys' wishes exceeding those of girls in the direction of personal achievement and self aggrandizement, girls' exceeding boys' in the direction of social and family relations and personal characteristics. These differences are most striking in the seventh and eighth grades, when the girls are predominantly pubescent but the boys are not.

There are also clear developmental differences, with a peak of concern about identity, family, possessions, living situation and travel in the elementary grades; looks, stature, age and mental capacity in junior high; personal-social relations and social welfare in high school. There was some tendency for developmental shifts to be greater for girls than for boys in the population sampled by this study.

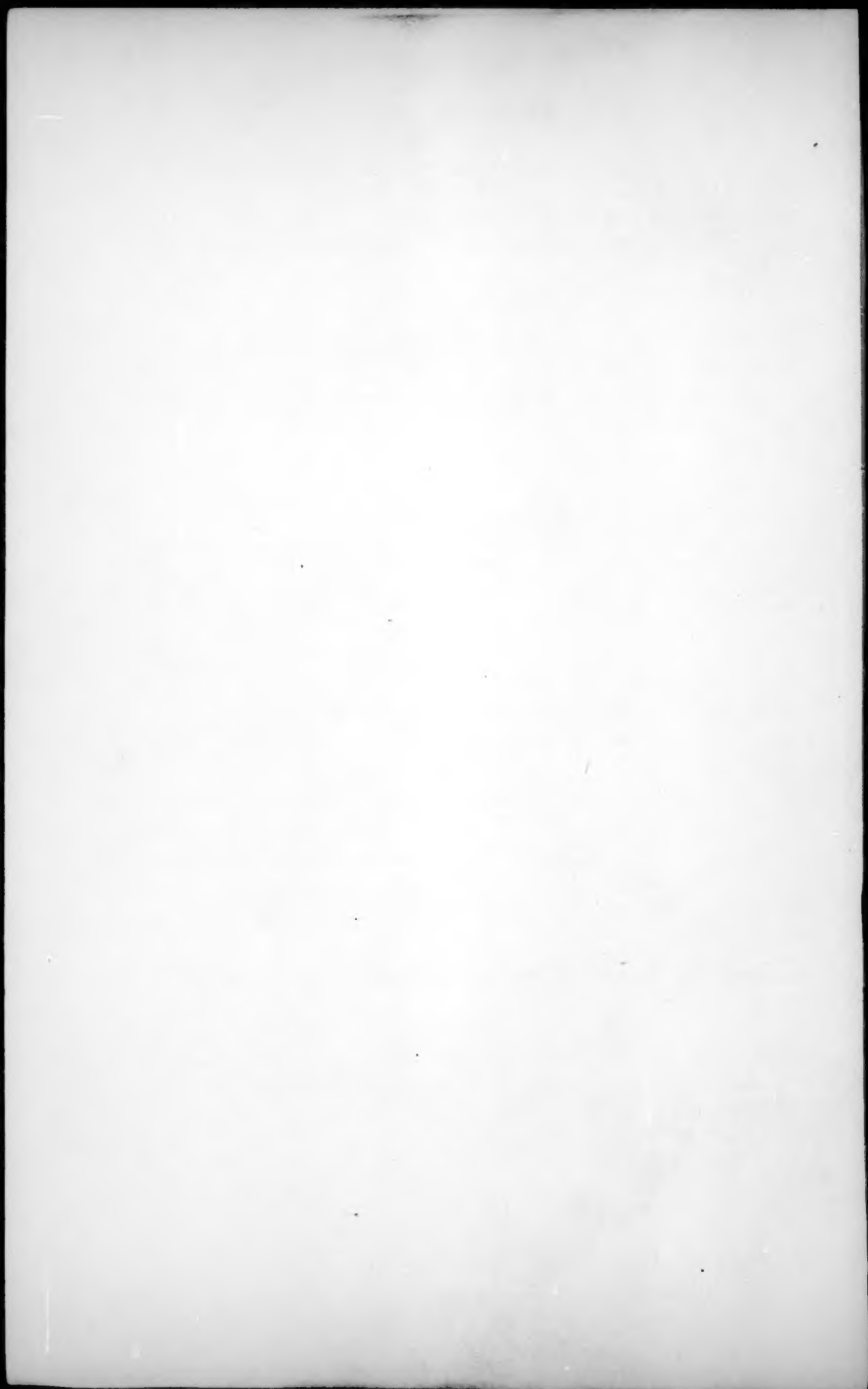
The form of statement to which response is made makes a difference in the content of wishes expressed. When the statement is restricted by strong self-reference, as in Item 1, "I wish I were . . ." wishes tend to be more introverted than when the reference is general, as in Item 24, "I wish more than *anything* that . . ." In the former case, wishes for looks, stature,

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age, identity and smartness are prominent; in the latter, these tend to be absorbed in the more general and less introverted categories of personal achievement and personal-social relations, while general welfare, on the one hand, and material possessions, on the other, become prominent.

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PERCEIVED PARENT ATTITUDES AS DETERMINANTS OF CHILDREN'S EGO STRUCTURE¹

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THE PROBLEM

This study is concerned with the relationship between children's perceptions of acceptance-rejection and intrinsic-extrinsic valuation by parents, on the one hand, and various components of their ego structure on the other. Its principal differences from related studies in this area are (1) in relying on children's perceptions of parent attitudes and behavior rather than on parents' reports or observers' ratings, and (2) in relating these perceptions of parent attitudes and behavior to such characteristics of ego structure as level of ego aspiration, goal frustration tolerance and ideational independence rather than to criteria of personal and social adjustment.

The use of children's perceptions of parent attitudes and behavior as the independent variable, instead of measures based upon actual behavior (or attitudes) of parents as reported by them (e.g., 10, 11, 12) or as rated by observers (e.g., 3, 6, 8), is predicated upon two assumptions. First, although parent behavior is an objective event in the real world, it affects the child's ego development only to the extent and in the form in which he perceives it. Hence, perceived parent behavior is in reality a more direct, relevant and proximate determinant of personality development than the actual stimulus content to which it refers. The relationship between parent behavior and its perceptual equivalent is, of course, an important problem in its own right. But in attempting to identify causal factors influencing personality development, it is less relevant to establish the nature of the actual environment to which the individual is exposed than to ascertain the distinguishing features of his perceived world. Second, it seems reasonable to suppose that children's perceptions of parent behavior and attitudes can be measured more validly than these latter phenomena themselves. In relation to such emotionally loaded issues as acceptance-rejection and intrinsic-extrinsic valuation, both verbal responses by parents to structured or unstructured interview questions and ratings of actual parent behavior

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by observers are inevitably contaminated by the parents' understandably strong motivation to perceive their role behavior in a favorable light and to similarly impress others. Furthermore, the intent of such inquiries can be more effectively disguised from children; and because of their relative inexperience in such matters, the responses of the latter are less likely to be devious representations of actual feelings.

Unfortunately, however, the validity of perceptual measures, i.e., the extent to which verbal reports of perceptual content correspond to actual perceptual content, can never be adequately determined. Correspondence to actual parent attitudes is an unsatisfactory validating criterion since perceptual instruments do not purport to measure parent attitudes but children's perceptions of same. On the other hand, the very same difficulties of validation apply equally well to observers' ratings of parent attitudes and behavior. In neither case are genuinely independent validating criteria available.

THEORETICAL ORIENTATION

The kinds of relationships that are hypothesized as holding between (1) parental acceptance-rejection and intrinsic-extrinsic valuation and (2) children's ego structure are derived from a conception of the role of these parent attitudes in the normative course of personality development and in individual deviations therefrom (1). The initial phase of ego development following the emergence of a functional self-concept may be characterized as omnipotent for two main reasons. First, as a result of their relatively permissive and indulgent handling of the child, parents provide environmental support for his self-perceptions of volitional power and independence; more so than at any other time, they gratify the majority of his legitimate desires and make exceedingly few demands on him. These self-perceptions are further enhanced by the parents' subservience to the child's will in spite of his manifest incompetence and executive dependence on them. Second, because of cognitive immaturity, the infant is unable to appreciate that this volitional subservience on the part of parents is merely a manifestation of altruism out of deference to his helplessness, rather than evidence of obligatory compliance with the magical properties of his will.

However, between the ages of two and three a crisis in ego development arises. Motor, cognitive, and social growth enable the child to become increasingly responsive to parental direction. Thus, as the parents gradually begin to make greater demands on the child, to initiate him into the ways of the culture, and to assume the volitionally ascendant role in the relationship, the environmental supports for the perception of volitional omnipotence and independence become undermined. Concomitantly, as a result of increased cognitive sophistication, the child becomes able to appraise his actual status in the household more realistically, and to appreciate that he is volitionally as well as executively dependent upon his parents.

In the face of these devaluing pressures, ego structure tends to undergo reorganization on a more modest basis. The most tenable and least traumatic solution is for the child to abandon pretensions of omnipotence and to identify with his parents in a volitionally dependent sense. He thus acquires a derived or satellizing status which, by the fiat of acceptance and intrinsic valuation, provides him with a source of adequacy feelings relatively independent of his own competence and performance ability. However, in order to retain this derived status, gain needed approval, and avoid disapproval and guilt feelings, the satellizing child tends to internalize parental values implicitly on the basis of personal loyalty, and to conform to such parental expectations of personality maturation as becoming more responsible, executively independent, and capable of postponing the need for immediate hedonistic gratification.

From the foregoing normative paradigm of ego development, it follows that if parents are either unwilling or unable to extend acceptance and intrinsic valuation, the acquisition of derived status becomes impossible. The child has no alternative but to seek a sense of adequacy in a primary status predicated upon his own performance ability. Since such status constitutes the sole basis of his self-esteem, his ego aspirations for successful performance tend to be compensatorily high, unrealistic, and resistant to lowering; and although infantile aspirations of omnipotence are obviously untenable in terms of current dependent biosocial status, they remain undervalued, nurtured in fantasy, and projected into the future. Having no derived status to preserve, parental values and standards of maturity need not be implicitly assimilated on the basis of personal loyalty, but only insofar as they serve the interests of expediency and self-enhancement.

Hence it was hypothesized that children who perceived themselves as rejected or extrinsically valued by parents would exhibit relatively high levels of ego-aspiration and goal frustration tolerance, would be more likely to nurture notions of omnipotence, would demonstrate more ideational independence from parents, and would conform less to characteristic parental expectations of personality maturation in our culture.

METHOD

Subjects

The subjects in this study were forty fourth and fifth grade children drawn from two elementary schools in Champaign, Illinois. An equal number of subjects was selected from each school, from each of the two grades, and from each sex group. Educationally retarded children and children from "broken homes" and with fathers in military service were excluded from the study. All of the subjects were white and resided in lower-middle and working class neighborhoods. The mean age of the boys was 10.3 years and the mean age of the girls was 10.2 years when the study began.

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In each school, data were collected during the course of an after-school arts-and-crafts program meeting ninety minutes twice weekly for a semester. Instruction and materials were furnished free of charge. Participation in the program was voluntary and by consent of parents, but regular attendance was expected. Approximately one-fifth of the subjects' time in the arts-and-crafts class was utilized for the individual and group tests described below. Four of the junior authors administered the tests and another served as arts-and-crafts instructor.

In the case of all instruments, scores deviating more than two standard deviations from the group mean were discarded. Since homogeneity of variance between the two schools prevailed for the overwhelming majority of instruments, the data of all forty subjects were handled for correlational purposes as if derived from a single school population. However, individual means and sigmas were employed for weighting scores and for computing standard scores whenever the *F* test on the variance ratios between the two schools was significant at the five per cent level of confidence or better.

Measuring Instruments for Independent Variables

The following kinds of parent behavior and attitudes were regarded as reflective of rejection: neglect, physical separation, disavowal of responsibility; denial of legitimate needs and wishes of the child; imposition of unjust punishment, criticism or humiliation; lack of patience, consideration and affection; unwillingness to accept inconvenience for the sake of the child, and inability to inspire his confidence. Criteria of extrinsic valuation by the parent included excessive concern with the child's school accomplishment as a vehicle for enhancing his own status; evidence of overmotivating the child and planning for his career in grandiose terms; and excessive public display of his school and other accomplishments.

Three different kinds of instruments for measuring these perceived parent attitudes were tried provisionally in an effort to find one or more with sufficient reliability for research purposes: (a) Thematic Materials Test, consisting of 16 selected, individually-administered pictures from the Thematic Apperception Test (9), the Children's Apperception Test (4), the Blacky Pictures (5), the Symonds Adolescent Fantasy Test (13), and the Lydia Jackson Projection Test (7). The pictures (eight for each of the two categories of parent attitudes) were selected on the basis of appropriateness of manifest content for depicting the parent attitudes of acceptance-rejection and intrinsic-extrinsic valuation respectively.² Each picture was briefly described by the experimenter and represented as an actually occurring incident or situation. Two alternative interpretations were then presented—one at either extreme of the perceived parent attitude under investigation. The subject was requested to choose the alternative which

² In order to insure that the manifest content of the material was sufficiently ambiguous and unstructured to permit diversity of interpretation, the final form of the test included only items in which satisfactory variability of response occurred.

he thought was most in accord with the actual situation supposedly depicted by the picture. (b) Story Completion Test, consisting of 16 brief, purportedly true stories, half of which were illustrative of parental acceptance-rejection and the other half of intrinsic-extrinsic valuation.* As in the Thematic Materials Test, the subject was asked to indicate which one of two interpretive endings he believed to be most congruent with the information already provided. This test was also administered on an individual basis. (c) Parent Attitude Rating Scale, consisting of 36 parent attitude and behavior items reflective of acceptance-rejection and intrinsic-extrinsic valuation. The subjects rated each item along a five-point scale of perceived correspondence with own parents' attitudes and behavior. The scale included 18 items for each of the two categories of parent attitudes and yielded a separate score for each. On the basis of ratings made by 25 adult judges on a longer preliminary form of the scale, ambiguous items (i.e., those with high *Q* values) were eliminated from the final form. The items were also selected so as to constitute a relatively normal population of items in terms of extremeness of attitude being measured. Raw scores of subjects on all three instruments were appropriately weighted following item analysis.

Only the rating scale measures of acceptance-rejection and intrinsic-extrinsic valuation were sufficiently reliable to be used for exploring the relationships investigated by this study. Their respective corrected split-half reliability coefficients were .68 and .81. The comparable coefficients for the thematic and story completion instruments varied from zero to .26.

Measuring Instruments for Dependent Variables

Notions of omnipotence were measured by the Could You Ever Scale.³

This scale consists of 80 questions (each beginning with "Could You Ever . . .") tapping perceived ability to perform tasks varying on a continuum from probable to relatively improbable and impossible. It consists of two separate parts—a childhood subscale making reference to the current capacity of the subject, and a projected adult subscale requiring the latter to respond in terms of anticipated capacity in adult life. Separate scales with sex appropriate items were administered individually to male and female subjects. Raw scores on each subscale were weighted on the basis of sigma values of items, converted into standard scores, and combined into composite standard scores for the scale as a whole. This latter procedure was considered justifiable in view of the correlation of .72 between the two subscales. The corrected split-half reliability coefficients were .94 for the boys' scale and .91 for the girls' scale.

Level of ego aspiration was measured by composite goal discrepancy score—the algebraic sum of each subject's goal discrepancy scores (expressed

* See footnote on previous page.

³ This instrument was conceived by Leonard S. Blackman.

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as standard scores) on five different tasks (addition-subtraction, letter cancellation, pegboard, circle-dot, and disassembling of nuts and bolts). For each task, total goal discrepancy scores (level of aspiration for succeeding trial minus performance on preceding trial) were computed on the basis of four trials. A trial was defined as an interval of time, uniform for a given task, during which the subject attempted to complete as many units of work (e.g., addition examples, insertion of pegs) as possible. The split-half reliabilities of the five goal discrepancy scores varied from .65 to .96 with a mean of .87; the intercorrelations among them varied from .44 to .87 with a mean of .65. Because of the relatively high generality of function over trials within a given task as well as among markedly different tasks, it seemed justifiable to use a composite goal discrepancy score and to regard it as reflective of a generalized tendency to maintain a high level of aspiration in relation to the realistic considerations posed by prior performance.

Goal frustration tolerance was measured by composite goal tenacity scores (2). Goal tenacity scores are derived from the same data as are goal discrepancy scores. They are computed by simply subtracting from the latter scores the preceding attainment discrepancies. Since attainment discrepancy (performance on a given trial minus aspiration for same) is reflective of feelings of success or failure associated with past performance, goal tenacity scores relate level of aspiration for subsequent performance to these findings, and, hence, measure the subject's tendency to maintain high levels of aspiration in the face of failure experience. The split-half reliability of the five scores comprising composite goal tenacity varied from .80 to .97 with a mean of .92; the intercorrelations varied from .14 to .71 with a mean of .44 ($p < .01$). In the case of stylus maze performance, uniform and cumulative experiences of failure were experimentally induced for each subject by reporting bogus performance scores which were always a predetermined percentage of previous level of aspiration. The stylus maze goal tenacity scores calculated on this basis had a split-half reliability of .97 and correlated .38 ($p < .05$) with composite goal tenacity scores.

Two measures of ideational independence were employed: (a) non-satellizing moral responsibility—the extent to which the subject justified his choice of moral behavior on grounds other than implicit acceptance of the inherent or axiomatic rightness of an underlying ethical precept. The subject was presented with eleven purportedly true situations each dealing with a moral problem confronting a boy or girl of his own age (e.g., cheating, lying, stealing) and was asked to evaluate the moral behavior involved and to indicate the reason(s) for his evaluation. Responses were scored as satellizing if they indicated unquestioning acceptance of a moral principle, and as non-satellizing if reference was made to fear of punishment, expediential considerations, or to abstract concepts of equity and reciprocity. The split-half reliability of these scores was .80. (b) Disagreement with perceived parent opinions—the degree of expressed divergence of a subject's opinions

from perceived parent opinions on various issues concerned with parent-child relationships (e.g., home chores, discipline, privileges, spending money). The subject first rated 41 such statements on a five-point scale of perceived parental agreement or disagreement with same. One week later he rated these same statements in accordance with his own opinions. The score given each subject on this test was the sum of the discrepancies between own and perceived parent ratings (irrespective of direction of difference) on all 41 items. The split-half reliability of these scores was .67. They correlated .24 ($p < .05$) with non-satellizing moral responsibility.

Ratings by the arts-and-crafts instructor were used to measure two aspects of personality maturity: (a) executive independence (subject's disposition to do things by and for himself, without asking for assistance, when competent in a manipulative sense to do so); and (b) ability to postpone hedonistic gratification (capacity for deferring gratification of immediate pleasures and satisfactions for the sake of obtaining more substantial but distant rewards). Ratings made at mid-semester and at the end of the semester correlated .88 and .91 respectively for the two traits. Classroom teachers' ratings of executive independence correlated .42 with corresponding ratings by the arts-and-crafts teacher.

RESULTS AND INTERPRETATION

Girls perceived themselves as significantly more accepted and intrinsically valued by parents than did boys ($p < .01$ in each case). This finding was hardly surprising in view of established, culturally-determined differences in social sex roles. It is generally expected in our culture that adult males will acquire the major portion of their status on the basis of relative competence and performance ability. Females, on the other hand, can look forward throughout their entire life span to enjoying considerable derived status based solely on dependent personal relationships to others (parents, husband, adult children) who accept and value them for themselves apart from considerations of relative competence and ability. This difference in cultural expectations is almost inevitably reflected in differential parent attitudes toward boys and girls; and according to these data dealing with children's perceptions, such attitudinal differences are apparently communicated quite effectively, long before differential cultural expectations regarding social sex role can be actualized in adult behavior. If confirmed by similar findings in a large variety of sub-cultural settings, this attitudinal factor would undoubtedly constitute a major determinant of the characteristic sex differences in personality development and structure found in our culture.

Perceptions of acceptance and intrinsic valuation were highly related as shown by the correlation of .91 between the two parent attitude rating scales. This finding verified our *a priori* assumption that although accepted

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children could be either intrinsically valued or valued for ulterior purposes, the attitudes of rejection and intrinsic valuation were of necessity psychologically incompatible. That concomitance of this nature was actually involved in accounting for the above degree of correlation was clearly demonstrated when relationships between subjects' scores on the two rating scales were examined by means of a contingency table.

Findings bearing on the major hypothesis of this study, i.e., that various attributes of ego structure are related in particular ways to children's perceptions of parental acceptance-rejection and intrinsic-extrinsic valuation are summarized in Table 1. With only one exception (disagreement with perceived parent opinions), perceived rejection by parents was not significantly related to any of the ego structure variables. Perceived extrinsic valuation, on the other hand, was related to the majority of the latter variables in the hypothesized direction; in all instances, however, the degree of relationship was only low to moderate. Thus, children who perceived themselves as extrinsically valued tended to manifest more stylus maze goal tenacity and notions of omnipotence, to disagree less with perceived parent opinions, and to be rated as more executively independent and as less able to postpone hedonistic gratification. There were no significant

TABLE 1
CORRELATIONS BETWEEN PERCEIVED PARENT ATTITUDES AND
ATTRIBUTES OF EGO STRUCTURE

<i>Ego Structure Variables</i>	<i>Parent Attitude (Perceived) Rating Scale</i>	
	<i>Extrinsic Valuation</i>	<i>Rejection</i>
<i>Notions of Omnipotence</i>		
"Could You Ever?" Boys Scale	* .41	— .07
"Could You Ever?" Girls Scale	* .40	— .01
<i>Level of Ego Aspiration</i>		
Composite Goal Discrepancy Scores .....	.17	.13
<i>Goal Frustration Tolerance</i>		
Combined Goal Discrepancy Scores .....	.17	.18
Stylus Maze Goal Tenacity Scores	* .36	.14
<i>Ideational Independence</i>		
Non-Satellizing Moral Responsibility	— .04	.00
Disagreement with Perceived Parent Opinions ...	* .37	* .33
<i>Personality Maturity</i>		
Executive Independence (Instructor's Ratings) ..	** — .46	— .20
Executive Independence (Teachers' Ratings)	* — .31	— .14
Ability to Postpone Hedonistic Gratification	** — .53	— .06

* Significant at the 5 per cent level.

** Significant at the 1 per cent level.

differences between self-perceived intrinsically and extrinsically valued children with respect to level of ego aspiration, composite goal tenacity scores, and non-satellizing moral responsibility. Thus, the data provide only partial and limited support for the hypothesis under investigation.

To what extent this obtained modicum of relationship between independent and dependent variables is reflective of actual absence of more substantial relationship, and to what extent it is reflective of inadequacies of measurement is difficult to ascertain. In any event it is evident that problems of measurement in this area are formidable indeed. Completely unstructured projective devices (e.g., the original form of the CAT) are unsatisfactory for this type of investigation for two important reasons: (1) In this and younger age groups (as we discovered from a preliminary try-out), free responses tend to be extremely impoverished, irrelevant, or matter-of-fact descriptions of pictorial material. (2) Projective instruments by design are intended to elicit personality trends at a higher level of generality and extensity than perceptions of specific parent attitudes. However, when structured and given denotative specificity by means of a multiple choice device, thematic instruments were found to be completely lacking in reliability. Of course, in this latter instance, it is very possible that the material was so highly structured that the intent of the measures was overly transparent, thereby eliciting invalid responses. The same criticism obviously applies, to an even greater degree, to the rating scale despite its greater reliability. Thus, the greater subtlety with which perceived intrinsic-extrinsic valuation by parents could be measured probably accounts for the fact that it correlated more significantly with ego structure variables than did perceived acceptance-rejection.

A somewhat different but related issue further complicates the problem of measurement. In addition to the fact that children at a given age level differ among each other with respect to personality structure, they also share certain developmental commonalities that set them apart from other age groups. Thus, ten-year-olds as a group are not only near the normative childhood peak of satellizing orientation, but also (regardless of individual differences in ego devaluation, acceptance of volitional dependence, aspiration level, grandiosity of self-concept, etc.) enjoy an overtly dependent bio-social status in our culture. In the face of these compelling normative commonalities, important but relatively covert individual differences can easily be obscured unless measuring instruments are sufficiently subtle to elicit personality trends transcending phenotypic similarities referable to the age group as a whole.

SUMMARY AND CONCLUSIONS

The perceptions of forty fourth and fifth grade children with respect to acceptance-rejection and intrinsic-extrinsic valuation by parents were investigated by means of structured thematic and story completion materials and

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by children's ratings of parent attitudes and behavior. Only the last mentioned instrument exhibited adequate generality over items. Perceptions of acceptance and intrinsic valuation were highly correlated. Girls perceived themselves as significantly more accepted and intrinsically valued than did boys.

It was hypothesized that self-perceptions of rejection and extrinsic valuation (in contrast to those of acceptance and intrinsic valuation) would be related to a more omnipotently conceived self-concept, to higher levels of ego aspiration and goal frustration tolerance, to greater ideational independence from parents, and to less advanced levels of personality maturity. This hypothesis was confirmed in part for subjects who perceived themselves as extrinsically valued by parents, but not for those who perceived themselves as rejected. The former group of children tended to conceive of their capacities in more omnipotent terms, showed greater evidence of goal tenacity following cumulative, experimentally induced failure in stylus maze performance, disagreed more with perceived parent opinions, and were rated as less executively independent and as less able to postpone immediate hedonistic gratification. It was suggested that individual differences in the ego structure of subjects may have been partly obscured by the grossness and transparency of the measures used and by normative communalities referable to the overtly dependent biosocial status of all ten-year-olds.

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THE OVERT FEARS OF DAKOTA INDIAN CHILDREN¹

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The methods of child-training characteristic of the Dakota Indians are in the main mild and permissive, and consciously opposed to physical punishment which, they feel, is abused by white parents. However, to correct seriously unacceptable conduct they have their own severity: fear. Disobedient children are first told in detail about a terrible being who will appear if misbehavior does not cease. If this warning is not sufficiently impressive, a member of the family, disguised and dressed for the part, looms out of the dusk and chases the screaming little sinners. From eastern Santee to western Teton, bogies vary locally in number, sex, and type, but universally have a form or costume unlike people the children ordinarily see (3, pp. 127-128; 6, p. 27).

In 1951 and 1952, as part of a study of the changing role of women among Santee Dakota now living on the Oak River Reserve near Griswold, Manitoba,² I made systematic inquiry about the socialization process that had formed them and the extent to which they were continuing the same method in training their own children.³ Although several old women and all the younger mothers said that the old ways of acting out the bogey had dwindled to descriptions and warnings, it seemed to me wise if possible to check these statements with the acutely interested parties. Often a child

¹ Field work among the Canadian Dakota in 1952 and among the Minnesota Dakota in 1953 was financed by a grant from the Wenner-Gren Foundation for Anthropological Research. For assistance in formulating the problem and in reading and criticism of this paper, great thanks are offered to Dr. Kathleen M. Darley and to Professor Dale B. Harris, Institute of Child Welfare, University of Minnesota. The sympathetic cooperation of two teachers, Mrs. Alice Spence at Oak River Reserve, Griswold, Manitoba and Mr. Virgil Wurr at Morton, Minnesota, made the study possible.

² Canadian Dakota are descendants of Minnesota bands who fled across the border immediately after the Sioux Uprising of 1862. The Oak River Reserve was established in 1875.

³ In addition to free interviews and participant observation, I followed and adapted the *Ethnological Field Guide for Study of the Child* developed by Sister M. Inez Hilger, OSB; in 1952 I also used the *Socialization Interview*, prepared by the staff of the Laboratory of Human Relations, Graduate School of Education, Harvard University. I am greatly indebted to Sister Inez and to Dr. John W. M. Whiting for access to these manuscript materials.

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informant will readily disclose how alive are beliefs and customs which, according to self-conscious and defensive elders, have disappeared, but at Griswold, the prospect of finding a youngster who spontaneously or with mild inducement would talk to me, was slight. Therefore, in an attempt to see if anything could be picked up about the continuance and effectiveness of old types of training or of other items of culture content, I used the crude method of asking the children to write about their fears during a regular session of the day school.

PROCEDURE

The 21 children who took part in the exercises were from 8 to 14 years of age. I was not present when the teacher asked them to write about "the thing that frightened me most when I was a little child." She and I had agreed that if the children were told they need not put their names on the paper, we would thereby remove the blocks to free expression raised by self-consciousness and the suggestion of cowardice. However, ten children wrote their names and two others later identified their contributions. The children responded in the main by describing a single experience in from 50 to 60 words, often vivid and full of action. Only one child gave a list; this contained five items.

Considered alone, the results of studying so small a group would have little interest beyond the purpose of checking against the parents' statements. However, the kind of fears set down at the Oak River Day School when compared with the well-known findings of Hagman (1), Jersild and Holmes (2), and Pratt (4), can be seen in relation to general childish fears and to those characteristic of rural neighborhoods. For those elements which seem peculiarly Dakota, a comparative series was secured in 1953 from a rural school at Morton, Minnesota, attended exclusively by Dakota children living at the Lower Sioux Community. These Minnesota Dakota are much mixed with white and are predominantly white in culture. Here, 18 children from 6 to 14 years of age completed the sentence read to them by the teacher: "What scared me most when I was little, was" Names were again omitted but ages were written in each case. The longest response was 30 words. Only two children mentioned more than one fear.

RESULTS

The fears named by the two groups of Dakota children were first analyzed according to four main classes established by Jersild and Holmes (2) and, following their method, percentages were computed for number of fears in each category rather than for the number of children expressing them (Table 1). Within these categories fall 90 per cent of fears expressed by the Canadian Dakota and 82 per cent of those of the Minnesota Dakota.

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TABLE I
FEARS EXPRESSED BY DAKOTA INDIAN CHILDREN COMPARED
WITH OTHER FINDINGS

Subjects	C A T E G O R Y			
	I <i>Animals</i>	II† <i>Strange Persons</i>	III‡ <i>Accidents, Pain</i>	IV <i>Strange Objects and Situations</i>
PERCENTAGE OF FEARS IN EACH CATEGORY				
<i>Dakota, Manitoba</i>				
Age: 8-14 N= 21* ..	45	27.6	10.0	7.2
<i>Dakota, Minnesota</i>				
Age: 6-14 N= 18 ..	50	14.3	9.0	9.0
<i>Jersild I§</i>				
Age: 4- 6 ..	17.3	3.9	13.4	3.9
<i>Jersild II§</i>				
Age: 11-12 N=398 ..	13.5	1.4	6.7	0.5
<i>Jersild III§</i>				
Young adults	18.8	3.2	10.4	1.3
<i>Pratt||</i>				
Age: 4-16 N=570 ..	67.0	....	....	...
<i>Hagman¶</i>				
Age: 2- 6 N= 70 ..	36.9	....	....	...

* N = number of children.

† Category II: Strange; queer or deformed; masked.

‡ Category III: Falling, doctors, pain, accident.

§ For sources, see Jersild and Holmes (2). Jersild I, mainly urban, observations by mothers. Jersild II, urban, interviews with school children. Jersild III, recollections written by adults, mainly college students.

|| Pratt (4), rural school children.

¶ Hagman (1), small town, interviews with mothers.

Fears of Animals

In all the studies, by whatever method obtained, animals cause the greatest number of conscious childhood fears. For the Manitoba Dakota, the percentage of such fears is 45 and they are found in 52 per cent of the children; at the Minnesota community the percentage of animal fears and that of children expressing them are both 50. These figures are higher than for groups of urban children, but noticeably smaller than for rural children in Michigan (4).

More interesting is the kind of animals involved. At Oak River, Manitoba, large domestic animals and poultry account for eight of thirteen such fears, snakes for the rest. At Morton, Minnesota, ten fears of domestic

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animals include one dog. The Manitoba Indian children do not name dogs, although practically every household has at least one. Snake and frog were mentioned by one Minnesota Dakota. Both groups of Dakota are rural and stock-owning. Therefore, to quote the ubiquitous trap for the unscientific, "It seems reasonable that" But the 570 Michigan farm children studied by Pratt came up with these first-ranking fears: bears and snakes, and following close behind dogs and bulls, came lions, tigers and elephants. Only one pseudo-exotic animal appeared among the Dakota accounts—a snake "big as a stove pipe"—and even this was actually seen at the Brandon Fair.

Canadian Dakota children present their fearful animals in action. Four children told of being chased by a bull—each in a dream. The following is typical:

I dream about a bull chasing me and I can't move my leg and can't call for help. And when the bull is giving bump, I woke up and rub my eye, but they was no bull. I tolded my mother that I dream about a bull. I was afraid next night.

To be shocked motionless—a common feature in anyone's dreams—is among the Dakota also frequently mentioned in waking life.

Accidents, Falls, Pain

A few Dakota children named a fall or a medical experience as a major cause of fear. One Canadian boy of 14 described a fall from a tree; a second "nearly fell off a horse"; a third mentioned the doctor's long needle. One Minnesota eight-year-old had fallen through a barn roof and another "fell in to the water and seen fish."

Strange Situations

All of the strange situations which frightened Dakota children occurred off the reserves and could be expected to turn up on any child's list: Griswold, Manitoba: the circus; planes at a airport. Morton, Minnesota: a show; a 3-D movie.

Strange People

In this category Jersild and Holmes put several kinds of unfamiliar human figures to which children attributed strong fear: strangers, people of queer or deformed appearance, masked persons. When reasons for fears are sorted according to this classification (Table 1), we find a contrast between Dakota and other children so marked as to suggest that at least some of the items in the category have different meanings for Indians than for whites. In the small group of 18 Dakota children in Minnesota, three (17 per cent) described fear rising from strange persons that fall in the three types of Jersild: a bum that came to my house; a known person dressed up

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like a bum; "my Dad looked through the window with a ghost mask." Drunken white men are dreaded in the Lower Sioux Community which, until very recently, was federal land and outside the sheriff's authority. Ghosts, judging by the old men's talk, are more frequent and less welcome visitors.

It is among the Canadian Dakota, however, that we see the greatest incidence of conscious fears of persons. Eight children (38 per cent, equal in number and ratio to those who said they most feared domestic animals) described terrors caused by strange or uncanny human figures. Seven actually saw these horrors; one was met in a dream. A nine-year-old girl tells with emotion about being followed by a strange man who came out of a gravel pit; her brother, age eleven, lists among five fears "a man with big eyes"; another boy of eleven tells at length about a pursuing ghost at a scout camp who turned out to be a teasing comrade with a "blankit over himself." The other five figures are now probably known to each narrator to have been human (two said so); but, at the time they appeared, they represented something supernatural to the child. One was Santa Claus at a church party; the other four were the bogey.

The supernatural socializer among Manitoba Dakota is *Wakanka-da*, the Old Woman who carries off bad children in her sack. Parents and grandparents describe her as a terrible figure with a white face; a big hump on her back, and a stick in her hand who will appear at dusk to the child who transgresses the social rules. If misconduct continues, a member of the family steals out of the house and hides bulky old clothes in bushes. At nightfall children playing in some forbidden manner outside the house will suddenly see advancing toward them the actual figure already imagined in horror, and will run home screaming. Children who persistently refuse to go to bed will hear a stick knocking at the door and the Old Woman will enter. The child at the time is unaware that the part is played by an older brother or by the grandmother who is his most trusted and tender support.

Reasons for the dramatized bogey are as often protective as punitive. A woman who in 1900 was frightened by the Old Woman when dangerously swimming at night with a group of small cousins played the part in 1951 to a grandson aged three for the double purpose of preventing him from running to the highway at night and of driving home the neighbors' small fry. Digging up vegetables in the gardens or persistent crying for little cause also brought forth *Wakanka-da*. In milder form she appeared as a figure woven from grasses beside a dangerous creek; or children were warned away from a well by hearing that the Old Woman lived at the bottom. To these motives, good in theory if disturbing in practice, there is sometimes added a clearly sadistic element. It is fun for the older brother or sister to scare the kids, and to certain adults there was also an element of pleasure. One old woman at Griswold, Manitoba, who for thirty years

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has been known as "great for it," told me, "I never scare children at night; it will make them sick." For today general lip-service and many enlightened parents are not in favor of the Old Woman, at least in material form. One elderly Dakota woman recalled her own childhood fright so fully that on at least one occasion as an adult, when she saw the Old Woman advancing in the dusk, she screamed and ran. Another, now 67, came home at night to find her first two children who had previously been chased by the bogey sitting out in the middle of a field, in terror of what might come out of the trees thick around their house; thereafter, the practice ended in that family. "We did it," she said, "because it was done to us and we knew how well it worked."

However, two women, one 70 and the other 50, described their recent dramatic performances, and young mothers in the course of the Socialization Interview, made frequent mention of warnings about the Old Woman which, they said, were no longer reinforced by materializations at dusk. Some mothers said they warned the children, others that grandparents did so; between four and six years was considered the right age to tell about the bogey. Two women of thirty said they had forbidden grandmothers to continue "haunting" after the two eldest children in each family had been made nervous and ill.

Here is what the children, translating *Wakankā-da* as "witch," wrote on the subject:

I dreamed about a witch chasing me and I couldn't run, so I got frightened and tried to call my mother but all I could say was a noise. So when she was nearly catching me I woke up. (A boy, aged 9, whose mother had stated that all talk of the Old Woman had ended with her sons, aged 18 and 17.)

My brother had an old hat and coat. The coat was all black and white and the hat was white, too. Then he wore all the clothes and run into the bushes. Suddenly I saw him coming from the bushes. He ran and chased me home, and he went back again. I got scared and grabbed my mother. (Boy, aged 12)

In spring we were playing in mud in the field. All at once we saw something was coming. It came near and it was a witch. I turned but I could not move my feet because they were stuck to the mud. At last they were free and I ran home. I got home in time.

When my mother and father are not looking I always go to the garden to steal carrots. When I was going to steal some carrots an old witch appeared from the bush, and stood beside the garden, but it was my brother.

These are examples of the overt fear inspired by the Old Woman. How much has been buried and transferred I do not know. Child training by bogies is, as mentioned earlier, a widespread Dakota trait. Minnesota Dakota at Morton know about it, but no woman interviewed had met it

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in dramatic form in her own childhood. The oldest, 88 years of age, had been warned and knew that formerly people acted out such things, but she was told "more about the devil and that if she was bad, she wouldn't go to heaven," which could account for the now prevalent fear of ghosts, often equated with the devil. A younger woman of 52 had been threatened by a great-grandmother with the materialization of *Wakanka-da* but the nearest she had ever been to a real performance was when her great-grandmother would suddenly throw her shawl over her head to scare the children—"it worked."

That parents other than Dakota Indians make use of the child's fear of bogies and exotic beasts is evinced from the inclusion of the following paragraph in a book published in 1952: "The trend with perceptual growth toward fear of imagined dangers is probably accelerated in some children by parental threats for childish misdemeanors. 'The bogeyman will get you!' 'A big tiger will come and eat you if you don't behave,' and similar parental threats would seem to reduce substantially the child's feeling of security" (5, p. 308).⁴ But few societies have more thoroughly institutionalized the practice than have the Dakota. As many of them say "it worked," and, one might add, it worked because it had everything, or rather it contained the possibility of arousing multiple types of fear. In Table 1 under the heading, *Strange Persons*, the proportion of such fears reported from the three Jersild series is low. But to what other categories of fear could the twilight appearance of this horrible punitive figure be assigned? From Jersild's fuller list four others are obvious: persons the child has been warned against; darkness and imaginary creatures; imaginary creatures without mention of darkness; guilt and fear of punishment. Percentages for expressed fears of imaginary creatures associated with darkness run thus for the three Jersild series: Children age 4-6, 12.6; age 11-12, 13.0; young adults recalling childhood, 12.9. As an agency of socialization, the Old Woman could not fail to be a powerful producer of habits which would tend strongly to prevent transgression of what the Dakota considered basic cultural rules.⁵

Other Fears

The ten per cent of fears set down by Canadian Dakota children which are not included in Table 1 are only three: an account of being chased by a ghost, and two "old Indian" stories told by mother and grandmother, one featuring an enormous snake which attacked a horse, and the other a woman who put her leg on a little boy and "it grew bigger and bigger." Among Minnesota Dakota, one child most feared darkness, and another mentioned being knocked down and buried alive; three named ghosts.

⁴ A Canadian Dakota mother told me, "Marjorie is afraid of tigers. She saw one at the Brandon Fair. Now when she is bad, we say, 'The Big Cat will come!'"

⁵ See Whiting and Child (7) on the origin of guilt.

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The fear of supernatural beings encountered among these two groups of rural Indian children can be compared with that found by Jersild and Holmes in a public and a private school in New York City (2, pp. 156-157). The percentage distribution is: Canadian Dakota (Old Woman and Ghost), 17; Minnesota Dakota, 14; New York Public School in a low economic district, 12.8; New York private school, 5.8; the two schools combined, I.Q., 80-100, 12.4; I.Q., 120 and above, 5.6. These and all major classes of fears, it is emphasized, are common to all levels of intelligence.

CONCLUSION

Overt fears of Dakota children fall within the usual categories. From their written expressions it is possible to identify the Indian child with rural white children of the United States and at the same time to recognize types of fear which, though they occur in all groups, here carry a significance characteristic of Dakota culture, particularly with regard to methods of child training. As to covert fear and the role of Dakota training in its production, having no competence in Freudian or behavioral psychology I do not know, and possessing more humility than intuition, I shall not guess.

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THE DEVELOPMENT OF CONCEPTIONS OF RULES IN CHILDREN

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It is well known that children's initial conceptions of moral rules are rather specific and linked with action and that eventually these become more general, abstract, and extensive. Most investigations of moral development confine themselves to describing the age-by-age progression, but there is some question as to how to account for the general growth trend. There is, for instance, Piaget's (12) explanation in terms of a shift from coercive to cooperative social relationships; and there are explanations stemming from learning theory (6) stating, for instance, that notions deriving from direct experiences in specific learning situations later are generalized to other situations. In addition, literature bearing on conceptual development (1, 17), on levels of thought (14, 16, 19), on saltatory development versus gradual development (20), and on role playing (5) is quite relevant to the general question of how awareness of rules develops.

This paper will report a study of the dawning of awareness of some rules governing transactions having to do with purchasing and will discuss the bearing that this material has both upon the development of moral rules in general and upon the theories currently accounting for this development.

METHOD

In papers published earlier (14, 15), a study of the development of monetary concepts in children was reported in considerable detail. The fathers of the children either owned small businesses or worked at white collar jobs in Bloomington, Indiana. Sixty-six children were interviewed: five boys and five girls at each age ($4\frac{1}{2}$ to $11\frac{1}{2}$ years), except at the lowest age where three of each sex were interviewed. A schedule of seventy-one questions was administered in four sittings, each lasting between fifteen and thirty minutes. The entire interview was completed within a month. School rooms with which the subjects were familiar were used for interviewing.

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Items were scored by arbitrary weighting.¹ Each child's responses to every item were scored, and children were arrayed in rank order by total score. Scale analysis, of the variety developed by Guttman,² was applied. Scale analysis distinguished nine scale types, indicated which responses went together to form each scale type, and showed the particular response or responses which differentiated any given scale type from those preceding it. As pointed out, these scale types are equivalent to "stages of development." One of the advantages of ordering data around scale types, rather than in terms of average age of subjects, is that one has an assurance that the response patterns of all children at any given stage are highly homogeneous.

The stages reported previously had to do with the child's conceptualizations of money and of relations existing between and among customers, storekeepers, storekeepers' helpers, manufacturers and manufacturers' helpers. Among the children's responses were some that pertained specifically to rules: i.e., canons regulating acts that should or should not be done with regard to handling money and with regard to persons involved in buying-selling transactions. Our analysis of the development of children's conceptions of rules will rest upon an examination of twenty-three responses.

ANALYSIS OF RESPONSES

Analysis of the data will fall into two parts. First, the responses will be analyzed separately. Then the responses will be grouped into larger classifications and "stages in rule development" will be elaborated.

Several children below the lowest age of our subjects ($4\frac{1}{2}$ years) were observed during the investigation. These very young children have no monetary rules, but engage in behavior which sets the background out of which rules eventually emerge. Thus the child may pile money or push coins around. This he has probably learned to do not through observing others handle money, but by way of fitting these objects, like other objects, into ongoing action-schemes of pushing, piling, and the like. A more "social" kind of act is that of a two-year-old who places coins in his pockets in imitation of his father. Somewhat later, children count coins: partly in imitation of the others who count coins, partly as a part of counting objects in general. These young children may also play store, feeling in a general and rather vague way that money should be present during the game, but having no clear notion of the function of money. Children may also reach

¹ This procedure is adequate if the purpose is to determine scalability. Correlation between two independent scorings was .99. Each section of the schedule was given twice to ten children from all age levels except the youngest and the oldest. There was a 2 per cent difference between test and retest responses. On only two items was there as much as 8 per cent change.

² Prediction error (second approximation) was 6 per cent. The ordinary criterion is 10 per cent or less error.

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the point of knowing that money buys, or only pennies buy, but not comprehend that the transaction cannot proceed without money or pennies. From this background of gradual development emerge the first genuine conceptions of rules—however deficient such notions may seem to the adult.

Scale Type 1 (Number of subjects, 7; median age, 5.4; age range 4.8 to 5.11)

Rule (a). YOU NEED MONEY TO BUY WITH, YOU CAN'T JUST TAKE GOODS WITHOUT PAYING. REASON: YOU JUST CAN'T; OR IF YOU DON'T PAY YOU'LL BE PUT IN JAIL—BUT NO REASON IS GIVEN WHY EXCEPT THAT YOU WILL.

This is a definitional rule: that is, one pays for goods for no other reason than that he must—by definition. If a consequence is envisaged, it follows also by definition, by a kind of direct connection between infraction and consequence that is grounded in no other rationale than its own connection. In the exchange of goods and coins there is also involved a directly apprehended equivalence; the child can virtually "see" the equivalence of coins paid and goods received.

Rule (b). ANY COINS BUY ANY GOODS; AND CUSTOMER GETS COINS IN RETURN FROM STOREKEEPER WHO MUST GIVE THEM OR DOES SO BECAUSE HE WANTS TO.

This rule exists by definition also and illustrates the above-mentioned general equivalence of goods and coins. Moreover the storekeeper's associated act of returning coins is governed definitionally or by his own personal whim; there is again direct equivalence of coins returned for coins paid.

Rule (c). CERTAIN AMOUNTS OF COINS ARE GIVEN FOR CERTAIN NUMBERS OF OBJECTS: FOUR FOR FOUR, ETC. CERTAIN SIZES OF COINS ARE PAID FOR CERTAIN SIZES OF OBJECTS: QUARTER FOR LARGEST OBJECT, DIME FOR SMALL, ETC. CERTAIN NUMBERS OF COINS ARE PAID BACK FOR CERTAIN NUMBERS OF COINS PAID BY CUSTOMER: TWO FOR TWO, ETC. CERTAIN NUMBERS OF COINS ARE PAID BACK FOR NUMBERS OF OBJECTS BOUGHT: TWO COINS FOR TWO OBJECTS, ETC.

The children invent these rules. The equivalence of coin for coin and coin for object is, again, in direct perceptual terms: i.e., size or number. Adherence to these rules is quite fluid; for, although the child utilizes them in play, the adult may violate them or ignore them, usually without arousing protest.

Scale Type 2 (Number of subjects, 5; median age, 6.5; age range, 6.0 to 6.11)

Rule (a). EXACT CORRESPONDENCE EXISTS BETWEEN THE "VALUE" OF COIN PAID AND AMOUNT OF GOODS IT CAN BUY.

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THUS A NICKEL BUYS A FIVE CENT CANDY, BUT IT CANNOT BUY A THREE CENT CANDY, FOR ONE NEEDS THREE PENNIES TO BUY A THREE CENT CANDY.

Although this is still a definitional rule—a coin of given value buys only objects of same value—it represents an advance on the more rudimentary rules of Scale Type 1. Formerly size was matched with size and number with number. Now “cents” is matched with “cents,” for the child knows that a nickel is worth five cents and is told that the object is worth five cents and so they are worth the same. The child is thereby moving away from direct perceptual comparisons, as in size against size. Another way of stating this is that the balancing of goods against money is now a balancing of things that look less homogeneous to direct perception.

Scale Type 3 (Number of subjects, 5; median age, 6-3; age range, 5-9 to 7-2)

Rule (a). COINS OF GIVEN VALUE CANNOT PURCHASE OBJECTS OF MORE VALUE BECAUSE THEY AREN'T “ENOUGH.” (THEY CAN NOW PURCHASE LESS). HOWEVER THE CHILD HAS NO KNOWLEDGE OF HOW MUCH MORE IS NEEDED TO PURCHASE THE OBJECT. THUS A NICKEL CANNOT BUY A SEVEN CENT CANDY, BUT IF A NICKEL IS ADDED THAT WOULD BE ENOUGH BECAUSE IT'S TEN CENTS THEN.

The child is getting away from definitional rules. He knows that seven is more than five (or “comes after” five) and that ten is “more than” seven—though he may not be able to figure out how much more. His rules of “can buy if have more, can't if less” involves much more than the direct perception of Scale Type 1 and the initial direct balancing of “same worths” of Scale Type 2. He is now engaged in manipulating the relations of “more worth” and “less worth,” though his operations with these concepts are, from the adult's standpoint, exceedingly deficient.

Rule (b). THE AMOUNT OF CHANGE RETURNED BY THE STOREKEEPER DEPENDS IN SOME SENSE ON THE AMOUNT PAID BY THE CUSTOMER, BUT THE MECHANICS ARE NOT UNDERSTOOD. THUS: “GIVE HIM A DIME AND YOU GET A NICKEL BACK; GIVE A NICKEL AND YOU DON'T,” OR “MAYBE HE GIVES THE SAME WORTH AS THEY GAVE HIM.”

The grownup's act of returning coins is governed no longer by absolutistic rules or by personal whim, but by some sort of balancing of relations of “worth” between what customer gave and what should therefore be given back. The relationships that are apprehended are no more specific than this rough balancing, for the child willingly receives any amount of change—whether more or less than he himself paid out. The role of the price of goods in the equation is not at all perceived.

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Rule (c). THE STOREKEEPER'S HELPERS GET PAID FOR HELPING, IN PART BY THE CUSTOMER WHO GIVES THEM MONEY, AND IN PART BY THE STOREKEEPER.

The payment of helper for services is more than definitional, since it is only fair for him to get paid for working. The child of course directly perceives the helper helping. However, since the payment for services is invisible and since the child actually sees the customer paying money to the helper, these two acts of supposed payment are confused, and so fused into one. But the rule covering work is unambiguous enough: work is paid for with money. The equivalence of "worths" (work and money) is now more heterogeneous than were previous equivalences that involved only goods and money, or money and money.

Scale Type 4 (Number of subjects, 4; median age, 6.5; age range, 6.0 to 6.11)

Rule (a). THE CUSTOMER MUST PAY FOR GOODS, OTHERWISE THE STOREKEEPER WOULD LOSE, OR BECAUSE IT COSTS THE STOREKEEPER. BUT THE CHILDREN DO NOT UNDERSTAND WHAT "LOSE" OR "COST" MEANS.

This rule rests upon definitional consequences that accrue to others rather than to self. The nature of the consequence is not clearly comprehended, but there is the notion that something occurs that is bad for the storekeeper if one does not pay him. This consequence follows "just because it does."

Rule (b). THE CUSTOMER DOES NOT PAY THE STOREKEEPER'S HELPER. ONLY THE STOREKEEPER PAYS HIM, AND FROM THE CUSTOMER'S MONEY.

Although the fine points of this payment are not under consideration, are not indeed even dreamed of, the child now understands that only the storekeeper really gets paid for goods. The fact that the customer's payment is for goods alone is aligned finally with the fact that the helper helps the storekeeper; hence his helping of customers is not really helping in the same sense as "working for the storekeeper." Hence the storekeeper has an obligation to follow the rule that work gets paid for. The direct perception that customers "pay" helpers is thus disregarded or discounted. This discounting was, in a much less complex way, what the child did earlier when he no longer used large coins to buy large objects but took into account that a large object might be worth very little, and so on.

Scale Type 5 (Number of subjects, 6; median age, 7.10; age range, 6.10 to 8.9)

Rule (a). RELATIONS OF ALL COINS ARE UNDERSTOOD.

The child now understands in quite a systematic fashion the relations of all coins (numbers) to one another. He not only understands the fine points

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of "more" and "less," but understands precisely why and how they are related.

Rule (b). CHANGEMAKING IS UNDERSTOOD AND DONE CORRECTLY.

This is merely the manipulation of the systematic consequences of relations between coins or "worths." For each transaction between purchaser and salesman there are specific consequences that can be worked out according to a flexible system of arithmetic rules.

Rule (c). THE MANUFACTURER PAYS HIS WORKERS FOR THEIR SERVICES AND PAYS FOR HIS MATERIALS (OUT OF MONEY RECEIVED FROM STOREKEEPERS) RATHER THAN JUST KEEPING THE MONEY ALL FOR HIMSELF.

This is the same as Rule (b), Scale Type 4, except that the relation between manufacturer and worker is more invisible than that existing between storekeeper and worker. The rule of payment for work is not extended to the manufacturer, obligation being conceived now as the same as the storekeeper's. In other words, the manufacturer and storekeeper roles instead of being conceived of as different are, for this set of activities, conceived of as identical.

Scale Type 6 (Number of subjects, 5; median age 8-7; age range, 7-5 to 9-8)

Rule (a). IT MAKES NO DIFFERENCE WHO GIVES FIRST—THE CUSTOMER HIS PAYMENT OR THE STOREKEEPER HIS GOODS AND CHANGE—BECAUSE IT AMOUNTS TO THE SAME THING ANYHOW.

In the preceding scale type, although the child understood the systematic relations and consequences of arithmetic, he was unable to apply his knowledge to this particular situation. Again, on a more complex level, he is now able to discount the evidence of his eyes through a rather elaborate manipulation of symbols.

Rule (b). CREDIT IS ALLOWABLE BUT SHARP LIMITATIONS ARE PLACED UPON ITS GRANTING. THE STOREKEEPER WILL DO IT ONLY UNTIL THE NEXT DAY, FOR AN HOUR, OR IF IT'S A FRIEND, ETC.

However, from the limitations placed upon credit, we can see that the child still does not apply his new-found knowledge of the systematic logical relations existing among numerical values to every "it doesn't matter who pays first" situation. What may be termed "the temporal" interfered with "the logical." The child does not discern that it really does not matter whether payment is made before goods are received or after, providing

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agreement is made that payment will be made at some determinable time. It is nevertheless significant that credit-with-limitations is conceded by the child simultaneously with his recognition of Rule 6 (a) discussed directly above.

Rule (c). THE OWNER OF THE STORE GETS PAID BY A SUBTRACTION PROCESS. HE TAKES WHAT IS LEFT FROM CUSTOMERS' MONEY AFTER PAYING FOR GOODS AND SERVICES.

Previously it was understood that the owner received payments for his goods, also that he paid his helpers, also that he paid for materials. These now are all seen to be related. Also the systematic coordinates of arithmetic are now applied in a more general sense than previously. In Scale Type 5 he was balancing the heterogeneous weights of money paid against goods and money returned. Now he is balancing the relation of "money for self" over against "money for materials and money for services."

Scale Type 7 (Number of subjects, 17; median age, 8-9; age range, 6-8 to 10-6)

Rule (a). THE OWNER OF THE STORE GETS PAID BY PROPORTIONATE SUBTRACTION. THUS HE AND THE HELPER MAY SPLIT THE MONEY IN HALF, OR THE OWNER MAY GET MORE BECAUSE HE IS THE OWNER.

This rule suggests that although the child is systematically organizing value according to more precise arithmetic coordinates than in the rule just above, his operations are still colored with what to an adult would be unwarranted "moral" considerations.

Rule (b). THE STOREKEEPER IS ALLOWED TO SELL GOODS FOR MORE THAN HE ORIGINALLY PAID THE FACTORYOWNER BUT IT'S REALLY NOT FAIR FOR HIM TO DO SO, ALTHOUGH IT IS DONE. THE CHILD DOES NOT KNOW THE REASON WHY.

Inappropriate moral considerations enter into this rule also. The child understands that the storekeeper is motivated by desires to make money. He understands also that according to the rules of arithmetic, goods worth so much are worth only that much—not more. Hence to sell them for more is "not fair." Yet he knows, because he has been told, that it is done sometimes. Hence, the child is experiencing conflict between or among his conceptions.

Rule (c). THE FACTORYOWNER DOES NOT SELL DIRECTLY TO THE CUSTOMER BECAUSE IT'S TOO GREAT A DISTANCE FROM FACTORY TO CUSTOMER.

The reasons why the factoryowner does not sell directly to customers were previously definitional (he just doesn't; he mustn't; only the store-

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keeper can because he's the storekeeper). The current rationale for the rule, though by adult standards inadequate, is an advance, for now there is a reasoned statement of consequences.

Rule (d). THE STOREKEEPER DOESN'T EVER *NOT* GIVE BACK LESS CHANGE THAN HE SHOULD TO CUSTOMER'S, BECAUSE THAT'S WRONG, OR BECAUSE THEN THE CUSTOMERS WOULDN'T RETURN.

Previously there was a flat denial that such shortchanging could occur. By definition, either it could not, or, on moral grounds, it could not. Now its possibility is denied: either on grounds of reasoned, calculated, consequences, or on grounds that because of his ethical sentiments the storekeeper would not, although he conceivably could, cheat his customers.

Scale Type 8 (Number of subjects, 6; median age, 9-9; age range, 8-4 to 11-0)

Rules (a), (b), and (c). PROFIT, PAYMENT OF OWNER AND WORKER, AND GRANTING OF CREDIT ARE NOW UNDERSTOOD.

At last the systematic relations and consequences of value are symbolically and impersonally manipulated, regardless of ethical and personal considerations.

Rule (d). UNDERSTANDING OF WHY THE MANUFACTURER DOES NOT SELL DIRECTLY TO CUSTOMER IN TERMS OF THE LOGIC OF THE DISTRIBUTION SYSTEM.

There is also, finally, a systematic coordination of groups of persons or rules according to conventionalized agreements and monetary understandings.

Scale Type 9 (Number of subjects, 11; median age, 11-2; age range, 9-7 to 11-6)

Rule (a). THE STOREKEEPER MAY SOMETIMES CHEAT HIS CUSTOMERS IN GIVING CHANGE, BECAUSE HE WISHES TO GET RICH.

Despite the systematic relations of money and the systematic, impersonal rules which govern profitmaker, personal (immoral) motives may prevail. But these latter motives prevail because of a reasoned calculation of consequences of what might happen if one is caught.

STAGES OF RULE DEVELOPMENT

The children's responses now lend themselves readily to being grouped into more general developmental stages. (The ages for any given stage presumably will vary with different populations.)

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Prior to Rules: Direct Action and Imitation (below 4 years, 6 months)

The handling of money either is connected with buying and selling, or is connected only in the vaguest sense. The child handles money just as he does certain other objects, by pushing and piling it. Or he imitates others' handling of it, putting it in his pockets, counting it. Or he knows in a vague way that it has to do with getting things at the store, but it not aware of its function in buying. This stage is analogous to Piaget's description of individual rituals and regularities of behavior, as when the child bounces marbles, groups them, cooks them, etc. (12).

Stage I: Definitional Rules and Direct Relations (age range, 4-8 to 6-11; median age, 5-8) (This period includes Scale Types 1 and 2)

The rules have no rationale except that they exist by definition. The consequences also are given by definition. Equivalences that exist between objects are definitional also, either by virtue of direct perception (size, number) or by adult pronouncement (a nickel is worth five cents and so buys five cent object). The groundwork for this type of rule is laid by pre-rule activities when the child learns to imitate the handling and counting of money, learns to recognize differences between coins, and understands in a general or undifferentiated sense that money and buying are connected. Rules of this first stage, in turn, are the basis for the next set which are only partially definitional and are only in part dependent upon rather direct vision.

Stage II: Rules Covering Indirect but Imprecise Relations (age range, 5-9 to 7-2, median age, 6-4) (This period includes Scale Types 3 and 4)

During this stage the child is beginning to grasp relations that involve much more than such rather direct relations as "pay large—get large," "pay five worth—get five worth," etc. The relations emerging are oblique or indirect. But more strikingly, the exact character of the relations tends to be left ambiguous. Even when pressed the child is inarticulate about the connection since he himself knows no other statement of the matter than he has already given. Thus the amount of change returned depends vaguely somehow upon the amount paid by the customer; things can't be bought if they are worth more than one has, but the relations of more and less are imprecise, etc. In one rule—that the storekeeper must be paid else he will lose out—the child conceives of a consequence occurring to someone other than himself. This is an advance over the preceding stage, but the connection between consequences and rule infraction is still definitional rather than rationalized.

The child generally is operating with concepts of value that are not apparent to his immediate perceptions although, as in his confusion over how workers get paid (in part by customers), he may still be misled by his

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own vision. But objects that are taken as equivalent—what is paid for what—are considerably more heterogeneous and indirectly related than formerly. Thus an activity (working) is now worth money. In the rule that storekeepers only pay workers, and not customers, we see a considerable clarification of a complex set of relationships, but the same taken-for-granted character of the relationship (i.e., the mechanics of payment) marks this rule as it does the other rules of this stage. Nevertheless, this type of rule is clearly a necessary prerequisite for the rules covering the more precise identification of relationships that begins with the next stage.

Stage III: Initiation of Precise, Systematic, Impersonal Relations (age range, 6-10 to 8-9; median age, 7-10) (This period is equivalent to Scale Type 5)

Now the systematic relations that exist among numerical values are comprehended. The child knows the relations between various amounts of money, can work them out symbolically, can return correct amounts of change, and so on. These relationships are quite independent of direct perception and of the ways that people feel about them. They are supra-personal and impersonal. All consequences flow from the nature of the arithmetical arrangements. However, there is a failure to realize that these arithmetical arrangements hold in various situations in which adults would readily apply them; for in these situations the child allows inappropriate moral and personal considerations to be the chief determinant of activity. This will be apparent in the discussion of Stage IV.

Stage IV: Extension of Impersonal Relations to Limited Social Situations (age range, 7-5 to 9-8; median age, 8-7) (This period is equivalent to Scale Type 6)

This is predominantly a period when the child begins to appreciate the extension of an impersonal logic to situations beyond those in which he first learned to apply that logic. Thus he is able to carry over the impersonal system of arithmetic calculation to a concrete money-handling situations, such as, it makes no difference whether the customer pays first or whether the storekeeper gives him goods and change first. In other words, this exchange is viewed now as a matter of logic, not simply or primarily a matter of timing. However the granting of credit (which is really a more complicated instance of "it doesn't matter who gives first") still is entangled with temporal and personal considerations; although the child is beginning to understand the extension of arithmetic underlying this set of relations too. Likewise the child now appreciates that the owner gets paid through a subtractive process because he is able finally to align systematically the relations extant among customer-storekeeper-helper-and-manufacturer. But this alignment is made in only a very general way. He balances sets of relations against other sets, but the balancing is imprecise and ambiguous, as will be evident in the discussion of the next two stages.

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Stage V: Further Extension of Impersonal Relations and Thus of Systematic Consequences (age range, 6-8 to 10-6; median age, 8-9) (This period is equivalent to Scale Type 7)

The child is at the threshold of understanding the wide and systematic application of those impersonal rules which govern buying-selling transactions. Because his comprehension is almost, though not quite, complete there are two characteristics which distinguish this stage very slightly from the preceding stage.

Profitmaking is sometimes allowed, but the children regard the practice as unfair. It is permitted despite its violation of arithmetic because of the storekeeper's personal motivation to become rich. There is, then, a sharpening of opposition or alignment of purely impersonal (arithmetic) arrangements and moral-personal (but inappropriate) arrangements. Similarly the child believes the owner gets paid and pays his workers not according to impersonal arrangements entirely, but according also to equity and whim. However, both semi-profit and semi-arithmetic (owner and worker) payments represent slight advances over the preceding stage where the extension of impersonal arrangements was more limited and the moral or whimsical was more taken for granted.

The other development marking this stage is a more extensive and articulate working out of consequences that result from the actions of related persons. Thus the storekeeper doesn't cheat, not by definition or because of moral reasons as formerly, but because of calculated consequences to himself if he did. Similarly the distribution system is what it is now because of consequences to various persons if it were not; thus it is understood why manufacturers do not ordinarily sell directly to customers. On the other hand, middlemen, other than storekeepers, are denied, no longer on definitional grounds but because the consequences of such an arrangement would make no sense for anyone.

Stage VI: Completion of Impersonal Rules Applying to a Wide System of Relations (age range, 8-4 to 11-0; median age, 9-9) (This period is equivalent to Scale Type 8)

The child at last stands at the summit of relations which are impersonally regulated. Profit is allowed, as is credit. The payment of storekeeper and of worker, of factoryowner and helper, are all impersonally and systematically regulated.

Stage VII: Calculated Infracton of Impersonal Rules for Personal Motives (age range, 9-7 to 11-6; median age, 11-2) (This period is equivalent to Scale Type 9)

Since the storekeeper is finally conceived of as sometimes tempted to shortchange, the child reasons that, despite the impersonal system of profit-making, personal (immoral) motives may prevail. These prevail because

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the storekeeper works out a reasoned calculation of consequences to himself if he is caught and then acts on the basis of his calculation. This represents a distinct advance over the preceding stage since apparently there was then an assumption made that since all these actions are governed by impersonal rules, the rules did so govern all these actions.

DISCUSSION

The rules that we have been discussing have dealt with matters of arithmetic, monetary value, profit, ownership, distribution, and the like. Such rules involve sanctions and punishments; they prescribe and proscribe. Although they regulate rather impersonal sets of relations, the rules are "moral canons" in the accepted usage of the term.

As is clear from our organization of the data, children's awareness of rules can be conceived as developing through a series of stages, each stage being a necessary condition for a movement to the next (15). At initial levels, rules are definitional, consequences are few or envisaged by fiat, action is linked closely with immediate situations and activities, and so on. Rules come increasingly to cover more extensive activities of increasing numbers of related roleplayers. To comprehend such rules the child must learn to take into account simultaneously and systematically increasing numbers of perspectives. As he does this he learns to discount—as Piaget (12) suggested many years ago—his own immediate perspective and perception.

How is this general line of growth to be accounted for? Piaget hypothesized in his *Moral Judgment in the Child* that the early conceptions of rules are absolutistic because of the authoritarian relations that necessarily exist between parent and young child, and that conceptions grow more relativistic and systematic as cooperative relationships spring up between child and others, particularly with his peers. But there is probably no need to ring in such special kinds of social relations, and we are going to suggest below that Piaget's work on thought processes indeed demonstrates this lack of necessity. Nor is it necessary to explain the growth of moral conceptions by recourse to such dubious, or, at any rate, such oversimplified, principles as reward and punishment, pleasure and pain, and learning from specific direct experience "to recognize a common element in a variety of situations (6, p. 439)."

The rules which we have investigated prescribe—as do any rules—sets of relations that exist among general roles, in this instance, those of storekeepers, customers, and others involved in sales transactions. All these roles, as any adult knows, are related systematically to one another. In the child's world, also, these roles are systematically related however odd and deficient and illogical the adult may find the systematization. As our materials bring

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out, the more advanced the child's conceptions of these roles, the closer his systematization approaches that of the adult.

Now "conception of role" is just what is suggested by the term "conception." It is a conceptualization of a set of activities seen in relationship to other sets of activities. At levels lower than that of adult comprehension, the child discriminates persons, acts, and things in terms of categories or concepts, but the content of his classifications (nickels, storekeepers, selling, etc.) are necessarily rather different than they will be later. As the child advances from stage to stage, the content and definition of his concept undergo continuous change. As new classifications are formed or discovered, old ones change, become revised and qualified. Eventually his classificatory system—said otherwise, his conceptualization of roles—becomes identical with that held by the general community of adults. The more the child's conceptualization approaches the standardized adult one, the more extensive are the connections among his concepts and the more "complex," "generalized," and "abstract" is his systematization of role relationships. This is brought out by studies of non-role concept development, such as that by Ames (1) on concepts of time, but it is equally applicable to studies of role concepts.

A highly generalized and abstract conceptual organization of role activities amounts to an ability to view each roleplayer from the organized perspective of related multiple other roleplayers. This ability, as our materials amply illustrate, is a slow emergent. At the lowest stages, the naming of what is expected of a given roleplayer from the perspective of another roleplayer does occur; but naming is rudimentary and linked closely with concrete situational activity. The more advanced the stage, the more generalized and impersonal becomes the organization of perspectives. This kind of observation was fully adumbrated in the writings of G. Mead (10) who, in explicit if general fashion, discussed the intimate relations between conceptual and role learning. He noted that when a child plays a role-game, enacts a role toward an imaginary other role (mother to postman, for instance) and then reverses these role parts, he is learning to conceive each and to name the activities of each from the standpoint of the other. Mead remarked that eventually the child learns to conceptualize multiple roles simultaneously, as in an organized game where the child conceives how each role looks from the standpoint of other players, where "these different roles . . . have a definite relationship to each other." Mead did not trace the development of this capacity empirically beyond noting the importance of conceptual learning, of play and of games. What is important in his remarks for our discussion here is his emphasis upon the development of (a) the ability to grasp the related perspectives of others and (b) the parallel rise of symbols or concepts.

A more recent paper by Hartley and his associates (5), which, like our own, brings out some of the oddities of children's role-conceptions, shows

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how these conceptions are paralleled by a very incomplete organization of perspectives, although Hartley does not stress the relevance of concepts. He notes, for instance, that for a young child a mother is either always a mother or is in some other role (saleslady), but never both simultaneously. Older children widen the positions from which roleplayers are viewed until an individual finally is conceived, according to Hartley, as momentarily or permanently playing one role but as potentially capable of playing many others *vis-a-vis* many other multiple sets of roleplayers. The inflexibility of the young child is merely the inability to slide in imagination from perspective to perspective as extensively or easily as the adult. The deficiency in Hartley's discussion is that the young child who cannot conceive of his mother simultaneously as a saleslady, nevertheless can conceive of her as a daughter of his grandmother; that is, in his immature systematization of role concepts, certain roles are related and others are not.

Conceptions of roles and conceptions of rules grow *pari passu*. Built into role conceptions are the justifications of motivations for behavior appropriate or inappropriate to enactment of roles (11). A storekeeper acts as he does "because—." At the highest levels of concept development, the justifications are generalized and, at least for such impersonal relations as exist in monetary transactions, highly abstract and impersonal. The rationale for the storekeeper's profit, for instance, is geared in with the rationale underlying the roles of his counter-roleplayers. To talk of rules and punishment for rule-infracton is simply another way of stating role relationships. The young child's inability to grasp the nature or full extent of adult rules means that he is unable to make proper conceptual distinctions; likewise that he is unable to grasp the consequences for certain roleplayers of certain acts committed by any given other roleplayer. Said still otherwise, he does not grasp the values of acts as seen from given standpoints because he cannot identify, designate, or name the position; he cannot put himself into it (15).

The development of a capacity to relate systematically whole sets of roles is surely linked with the general development of children's capacity to think. There is considerable dispute, of course, over whether young children's thought processes are somewhat different from those of adults or just less well informed with facts and experience (19). The later excellent work of Piaget (13), and of Werner (19), Freidson (3), Schuessler and Strauss (14), as well as the literature on schizophrenic, aphasic, and other types of "abnormal" thought by Goldstein and Scheerer (4), Cameron (2), Kasanin (8), Vigotsky (16), Weigl (18) and others, at least tends to support the interdependence of high-order conceptualization and ability to take multiple perspectives extensively, flexibly, and abstractly. Regardless of the outcome of the dispute over whether children and adults think "basically" alike, it is not unreasonable to suppose that growth in the ability to relate multiple perspectives in the social sense is somehow linked with the ability to relate

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multiple perspectives in the logical sense (cf., Piaget's discussion of logical addition and multiplication, 13).

Any discussion of development in thought processes necessarily raises the question of what Werner and Kaplan (20) have called "saltatory changes" or "developmental shifts." In this recent monograph Werner has pointed out that in his own study, as well as in that of other writers, (a) there appear with advancing age genuinely new kinds of thought processes, and (b) that the appearance is often sudden or abrupt. In our materials the appearance, stage by stage, of role and rule conceptions indicates the same kind of novel emergent. When the child reaches certain points of conceptualization, very drastic realignment of roles and rules is called for and occurs. Whether shift in alignment is gradual or abrupt our data does not tell us, although it is probable that realignment cannot drag over too long a period, if only because shifts of concept necessarily bring shifts of other concepts in their wake (15).

As a concluding note, it is worthwhile to distinguish between (a) the development of a general ability to comprehend moral rules (and social roles) and (b) the learning of specific types of rules and roles. Such types of rules and roles—for instance democratic or authoritarian—presumably are learned under specific social conditions and when learned have determinable kinds of effects upon personality. Most research upon children's development of course is concerned with this latter kind of learning. Yet the impact of the learning situation would seem to be dependent upon the level of concept, thought, or role conception of the child. Most or, at least, much research neglects this dependence and thus points up a real need for relating the two kinds of investigation in studies of children.

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THE RELATION OF "PRIMARY MENTAL ABILITIES" IN FIVE- AND SIX-YEAR-OLDS TO SEX OF CHILD AND CHARACTERISTICS OF HIS SIBLING¹

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PROBLEM AND PROCEDURES

As part of a larger study of the effect upon the personality of children of such family constellation details as sex of child, sex of sibling, ordinal position of child in his sibship and difference in age between child and sibling, it was decided to determine whether intellectual skills would show a significant relationship to these same variables. The question of the effect of the ordinal position of a child upon his intelligence test performance has been much explored as has also the question of the relative performance of the two sexes on various tests. Our study we may expect to make a contribution to the field, however, because (a) the interaction of the variables, sex, sib's sex, ordinal position and the age difference between siblings has been investigated as well as the main effects; and (b) a different test has been used, namely the SRA Primary Mental Abilities Test, Primary Form (31). Since the subtests of the Thurstone Test are alleged not to be highly correlated (test intercorrelations on the standardization population ranged from $+.46$ to $+.67$) and to measure rather specific abilities, it should be of interest to discover whether performance on the "specific abilities" subtests bears any relation to the independent variables mentioned above.

The Primary Mental Abilities Test was given to our subjects by the adjustment teacher in various public schools and by the experimenter or

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her assistant to subjects enrolled in one private school. In the public schools the tests are given to the children either just before or just after they enter the first grade. Hence, the mean age of our subjects in the various subgroups is around 71 months. The information concerning the family constellation items was obtained chiefly from the school entrance records of the children; but, if essential data were missing, the parents of the child were contacted for further information. Since it is unlikely the mothers would report abortions and miscarriages on entering their "first" child in school, those groups of our subjects which we call "first-borns" are probably a mixture of biological and social firsts. Our second-borns, it should be noted too, are not only the second in their families but also the youngest, since our subjects came from two-children families. The children are the biological offspring of the parents with whom they lived; i.e., no adopted or step-children are included. With the exception of one private school, public schools in Chicago furnished all the records of the children. Although usually only one of the sibs in a family was studied, it was a condition of the inclusion of a child in the study that both he and his sib be free from gross physical and mental defect. Hence, if gross mental defect is related to any of our independent variables, this relation would not be uncovered by our investigation.

In fact, most selective factors influencing school admission or age at school admission are not neutralized directly in our investigation, as we dealt only with children of ages five and six who were in school. Our information relative to the family, too, was only that which the school had in its file. Hence, such a variable as, age of mother, which might vary rather systematically with ordinal position of the child was not controlled. We also had no information on the total life socio-economic environment of our children. This might, of course, be different for first- and second-borns. However, our efforts to match groups on the basis of the child's present socio-economic environment probably controls this variable substantially.

Lastly, there are doubtless more completed families represented among those groups in which the children differ greatly in age than among those in which the sib spacing is closer. This difference may color some the family attitudes met by the children in our various spacing groups. We do not know to what extent these limitations in controls influence our results but we do not see in the pattern of our significant findings what seem likely effects of the uncontrolled factors listed.

There were 120 children at each of three sib-spacing levels—i.e., the difference in age between the sibs was respectively under two, two to four, and four to six years. At each spacing level there were eight subgroups of 15 subjects as follows: boys with a younger brother, boys with an older brother, boys with a younger sister, boys with an older sister, girls with a younger brother, girls with an older brother, girls with a younger sister,

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girls with an older sister. The 24 subgroups—representing two ordinal positions for each of three spacings for each of the four possible child's-sex-sib's-sex combinations—were matched individual for individual on the basis of subject's age and the socioeconomic level of the father's occupation, according to the Minnesota Scale (9), as well as neighborhood of residence of the family (19). While absolutely exact matching was not possible, 99 per cent of our subjects were matched in age within six months and 75 per cent within four months. Ninety-three per cent were matched within one status

TABLE I
MEANS AND SIGMAS OF THE AGES OF SUBJECTS AND SIBLINGS IN
THE TWENTY-FOUR BASIC SUBGROUPS

DESCRIPTION OF GROUP				AGE IN MONTHS					
Subject		Sibling		Subject		Sibling		Sibling Age Difference	
Ordinal									
Sex	Position	Sex	N	Mean	Sigma	Mean	Sigma	Mean	Sigma
I. SIBLING AGE DIFFERENCE 7-24 MONTHS									
M	2	M	15	71.53	2.92	90.40	4.44	18.87	3.05
M	2	F	15	71.27	2.67	89.00	3.43	17.73	3.72
F	2	M	15	72.27	2.76	91.53	5.26	19.27	3.68
F	2	F	15	71.20	3.02	90.73	5.12	19.53	4.08
M	1	M	15	71.80	2.30	53.27	3.57	18.53	3.12
M	1	F	15	72.00	3.43	53.93	6.77	18.07	4.40
F	1	M	15	71.93	2.60	54.27	5.09	17.67	4.87
F	1	F	15	71.93	2.96	53.20	2.86	18.73	3.80
II. SIBLING AGE DIFFERENCE 25-48 MONTHS									
M	2	M	15	70.80	4.10	105.33	7.46	34.53	6.99
M	2	F	15	73.07	3.00	110.73	7.95	37.67	7.02
F	2	M	15	71.47	3.20	108.00	7.07	36.53	5.87
F	2	F	15	72.33	3.70	107.00	7.47	34.67	6.58
M	1	M	15	70.93	3.44	34.47	8.35	36.47	6.35
M	1	F	15	73.00	3.67	36.33	8.48	36.67	7.73
F	1	M	15	70.40	4.14	32.73	9.29	37.67	5.87
F	1	F	15	71.33	2.87	38.00	5.91	33.33	6.25
III. SIBLING AGE DIFFERENCE 49-72 MONTHS									
M	2	M	15	70.87	3.96	129.33	9.22	58.47	6.92
M	2	F	15	71.33	4.35	128.13	9.21	56.80	6.51
F	2	M	15	71.40	4.39	126.53	7.82	55.13	5.91
F	2	F	15	71.07	2.54	129.93	5.87	58.87	5.77
M	1	M	15	70.60	4.54	15.67	6.00	54.93	5.79
M	1	F	15	71.00	3.86	13.67	5.92	57.33	6.47
F	1	M	15	71.40	3.16	15.00	4.94	56.40	4.98
F	1	F	15	71.53	2.56	12.53	7.21	59.00	7.34

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level on the occupation scale and 88 per cent within one rank on the neighborhood scale. Level IV in the Minnesota Scale, which is the farm group, was not represented in the study. For a description of the groups, see Tables 1 to 3.

TABLE 2
DISTRIBUTION OF SUBJECTS IN TWENTY-FOUR BASIC GROUPS
(EACH WITH AN N OF 15)
IN TERMS OF FATHER'S OCCUPATION

DESCRIPTION OF GROUP			Age Difference between Siblings 7 to 24 Months							Age Difference between Siblings 25 to 48 Months							Age Difference between Siblings 49 to 72 Months						
Subject	Sibling		CLASS OF FATHER'S OCCUPATION																				
Ordinal	Position	Sex	I	II	III	V	VI	VII	I	II	III	V	VI	VII	I	II	III	V	VI	VII			
NUMBER OF SUBJECTS																							
M	2	M	5	1	2	6	1	—	3	3	4	4	—	1	3	3	6	2	—	1			
M	2	F	2	2	6	4	1	—	4	3	4	3	1	—	1	7	3	1	2	1			
F	2	M	3	2	4	6	—	—	2	5	3	3	2	—	2	4	6	3	—	—			
F	2	F	2	3	6	3	1	—	3	3	5	4	—	—	1	5	4	3	2	—			
M	1	M	2	4	3	4	2	—	5	1	3	6	—	—	4	3	3	4	1	—			
M	1	F	4	3	2	5	1	—	3	3	4	4	—	1	3	4	2	3	3	—			
F	1	M	4	3	4	4	—	—	3	3	3	4	2	—	2	4	5	3	—	1			
F	1	F	2	3	4	5	1	—	2	4	5	4	—	—	3	5	3	3	—	1			

TABLE 3
DISTRIBUTION OF SUBJECTS IN THE TWENTY-FOUR BASIC SUBGROUPS
(EACH WITH AN N OF 15)
ON THE BASIS OF NEIGHBORHOOD OF RESIDENCE

DESCRIPTION OF GROUP		Age Difference between Siblings 7 to 24 Months					Age Difference between Siblings 25 to 48 Months					Age Difference between Siblings 49 to 72 Months					
Subject	Sibling	SOCIO-ECONOMIC CLASSIFICATION OF NEIGHBORHOOD OF RESIDENCE															
Ordinal																	
Sex	Position	Sex	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
NUMBER OF SUBJECTS																	
M	2	M	8	5	-	2	-	6	4	1	3	1	9	5	1	-	-
M	2	F	7	3	-	4	1	8	1	4	-	2	8	3	1	3	-
F	2	M	9	4	-	1	1	6	2	3	4	-	7	4	1	2	1
F	2	F	8	3	-	4	-	7	3	1	4	-	4	8	1	1	1
M	1	M	10	3	1	1	-	9	-	5	1	-	11	1	1	1	1
M	1	F	9	3	2	1	-	8	1	4	2	-	7	1	3	3	1
F	1	M	9	-	3	2	1	8	4	3	-	-	11	1	1	2	-
F	1	F	7	4	1	3	-	6	3	4	2	-	9	2	1	2	1

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TABLE 4

MEAN AGE QUOTIENTS FOR THE VARIOUS SUBGROUPS OF THE VERBAL
AND PERCEPTUAL SUBTESTS OF THE THURSTONE
PRIMARY MENTAL ABILITIES TEST

SUBGROUP			Verbal Subtest				Perceptual Speed Subtest			
Subject	Sibling		AGE DIFFERENCE BETWEEN SIBLINGS IN MONTHS							
Ordinal										
Sex	Position	Sex	7-24	25-48	49-72	Total	7-24	25-48	49-72	Total
			QUOTIENT MEANS				QUOTIENT MEAN			
M	2	M	110.67	121.67	118.33	116.89	99.33	106.00	112.33	105.89
M	2	F	114.67	116.00	110.00	113.56	104.67	109.67	99.00	104.44
F	2	M	119.33	114.67	118.00	117.33	110.33	107.67	105.33	107.78
F	2	F	111.33	119.33	114.67	115.11	111.33	102.67	106.00	106.67
M	1	M	116.00	128.67	118.33	121.00	98.00	103.67	101.33	101.00
M	1	F	116.33	119.33	113.33	116.33	95.67	101.67	97.67	98.33
F	1	M	112.00	117.00	114.33	114.44	102.67	103.00	107.00	104.22
F	1	F	107.33	105.33	109.67	107.44	106.00	100.00	96.33	100.78
M	2	M or F	112.67	118.83	114.17	115.22	102.00	107.83	105.67	105.17
F	2	M or F	115.33	117.00	116.33	116.22	110.83	105.17	105.67	107.22
M	1	M or F	116.17	124.00	115.83	118.67	96.83	102.67	99.50	99.67
F	1	M or F	109.67	111.17	112.00	110.94	104.33	101.50	101.67	102.50
M or F	2	M	115.00	118.17	118.17	117.11	104.83	106.83	108.83	106.83
M or F	2	F	113.00	117.67	112.33	114.33	108.00	106.17	102.50	105.56
M or F	1	M	114.00	122.83	116.33	117.72	100.33	103.33	104.17	102.61
M or F	1	F	111.83	112.33	111.50	111.89	100.83	100.83	97.00	99.56
M	1 or 2	M	113.33	125.17	118.33	118.94	98.67	104.83	106.83	103.44
M	1 or 2	F	115.50	117.67	111.67	114.94	100.17	105.67	98.33	101.39
F	1 or 2	M	115.67	115.83	116.17	115.89	106.50	105.33	106.17	106.00
F	1 or 2	F	109.33	112.33	112.17	111.28	108.67	101.33	101.17	103.72
M	1 or 2	M or F	114.42	121.42	115.00	116.94	99.42	105.25	102.58	102.42
F	1 or 2	M or F	112.50	114.08	114.17	113.58	107.58	103.33	103.67	104.86
M or F	1 or 2	M	114.50	120.50	117.25	117.42	102.58	105.08	106.50	104.72
M or F	1 or 2	F	112.42	115.00	111.92	113.11	104.42	103.50	99.75	102.56
M or F	2	M or F	114.00	117.92	115.25	115.72	106.42	116.50	105.67	106.19
M or F	1	M or F	112.92	117.58	113.92	114.81	100.58	102.08	100.58	101.08
M or F	1 or 2	M or F	113.46	117.75	114.58	115.26	103.50	104.29	103.12	103.64

RESULTS AND DISCUSSION

The group means for the total and subtest quotient scores are presented in Tables 4 to 6. (The data for the Motor Test are not considered in this report.) The analysis of variance data for the total group are given in Tables 7 to 9. In the interest of saving tables, the analysis of variance data

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for the various sib age-difference levels are not presented, but we shall comment on all significant relations at the various spacings. The error term used in the denominator in computing the *F* was the residual variance. The quotient score distributions for the population are essentially normal. The Bartlett Test indicates there is no reason to believe that the various subgroups are drawn from populations with different variances.

TABLE 5
MEAN AGE QUOTIENTS FOR THE VARIOUS SUBGROUPS OF THE
QUANTITATIVE AND SPACE SUBTESTS OF THE THURSTONE
PRIMARY MENTAL ABILITIES TEST

SUBGROUP			Quantitative Subtest				Space Subtest			
Subject	Sibling		AGE DIFFERENCE BETWEEN SIBLINGS IN MONTHS							
Ordinal										
Sex	Position	Sex	7-24	25-48	49-72	Total	7-24	25-48	49-72	Total
			QUOTIENT MEANS				QUOTIENT MEANS			
M	2	M	107.33	113.00	114.67	111.67	102.00	109.00	110.33	107.11
M	2	F	109.33	117.00	106.67	111.00	105.33	110.00	105.00	106.78
F	2	M	125.00	115.00	116.67	118.89	115.67	108.33	104.33	109.44
F	2	F	107.67	116.33	117.67	113.89	112.67	107.33	104.67	108.22
M	1	M	109.67	124.00	110.67	114.78	106.00	114.00	108.00	109.33
M	1	F	112.00	106.67	115.33	111.33	108.33	106.33	101.33	105.33
F	1	M	112.00	119.00	113.33	114.78	100.00	111.00	108.00	106.33
F	1	F	113.67	108.67	107.33	109.89	104.33	103.67	103.33	103.78
M	2	M or F	108.33	115.00	110.67	111.33	103.67	109.50	107.67	106.94
F	2	M or F	116.33	115.67	117.17	116.39	114.17	107.83	104.50	108.83
M	1	M or F	110.83	115.33	113.00	113.06	107.17	110.17	104.67	107.33
F	1	M or F	112.83	113.83	110.33	112.33	102.17	107.33	105.67	105.06
M or F	2	M	116.17	114.00	115.67	115.28	108.83	108.67	107.33	108.28
M or F	2	F	108.50	116.67	112.17	112.44	109.00	108.67	104.83	107.50
M or F	1	M	110.83	121.50	112.00	114.78	103.00	112.50	108.00	107.83
M or F	1	F	112.83	107.67	111.33	110.61	106.33	105.00	102.33	104.56
M	1 or 2	M	108.50	118.50	112.67	113.22	104.00	111.50	109.17	108.22
M	1 or 2	F	110.67	111.83	111.00	111.17	106.83	108.17	103.17	106.06
F	1 or 2	M	118.50	117.00	115.00	116.83	107.83	109.67	106.17	107.89
F	1 or 2	F	110.67	112.50	112.50	111.89	108.50	105.50	104.00	106.00
M	1 or 2	M or F	109.58	115.17	111.83	112.19	105.42	109.83	106.17	107.14
F	1 or 2	M or F	114.58	114.75	113.75	114.36	108.17	107.58	105.08	106.94
M or F	1 or 2	M	113.50	117.75	113.83	115.03	105.92	110.58	107.67	108.06
M or F	1 or 2	F	110.67	112.17	111.75	111.53	107.67	106.83	103.58	106.03
M or F	2	M or F	112.33	115.33	113.92	113.86	108.92	108.67	106.08	107.89
M or F	1	M or F	111.83	114.58	111.67	112.69	104.67	108.75	105.17	106.19
M or F	1 or 2	M or F	112.08	114.96	112.79	113.28	106.79	108.71	105.62	107.04

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TABLE 6

MEAN AGE QUOTIENTS FOR THE VARIOUS SUBGROUPS OF THE
TOTAL SCORE ON THE THURSTONE PRIMARY
MENTAL ABILITIES TEST

DESCRIPTION OF GROUP			Total Score			
Subject	Sibling		SIBLING AGE DIFFERENCE IN MONTHS			
Ordinal						
Sex	Position	Sex	7-24	25-48	49-72	Total
QUOTIENT MEANS						
M	2	M	105.00	113.33	114.00	110.78
M	2	F	109.00	113.33	104.00	108.78
F	2	M	117.67	112.00	112.00	113.89
F	2	F	110.33	111.67	111.33	111.11
M	1	M	106.67	116.67	109.33	110.89
M	1	F	107.33	107.67	107.00	107.33
F	1	M	107.00	113.00	109.00	109.67
F	1	F	107.33	103.67	104.00	105.00
M	2	M or F	107.00	113.33	109.00	109.78
F	2	M or F	114.00	111.83	111.67	112.50
M	1	M or F	107.00	112.17	108.17	109.11
F	1	M or F	107.17	108.33	106.50	107.33
M or F	2	M	111.33	112.67	113.00	112.33
M or F	2	F	109.67	112.50	107.67	109.94
M or F	1	M	106.83	114.83	109.17	110.28
M or F	1	F	107.33	105.67	105.50	106.17
M	1 or 2	M	105.83	115.00	111.67	110.83
M	1 or 2	F	108.17	110.50	105.50	108.06
F	1 or 2	M	112.33	112.50	110.50	111.78
F	1 or 2	F	108.83	107.67	107.67	108.06
M	1 or 2	M or F	107.00	112.75	108.58	109.44
F	1 or 2	M or F	110.58	110.08	109.08	109.92
M or F	1 or 2	M	109.08	113.75	111.08	111.31
M or F	1 or 2	F	108.50	109.08	106.58	108.06
M or F	2	M or F	110.50	112.58	110.33	111.14
M or F	1	M or F	107.08	110.25	107.33	108.22
M or F	1 or 2	M or F	108.79	111.42	108.83	109.68

Verbal Test

In the case of the Verbal Test (Tables 4 and 7), there are some interesting significant relations with sex, sibling's sex and ordinal position. The child sex differences, while rather consistently favorable to the male, are significant only in the subgroups among the first-borns when the age difference between the sibs is two to four years. Again, while those children with a

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TABLE 7

ANALYSIS OF VARIANCE OF THE AGE QUOTIENTS FOR THE
PERCEPTUAL AND VERBAL SUBTESTS OF THE
THURSTONE PRIMARY MENTAL ABILITIES TEST

Source of Variance	df	Verbal Subtest			Perceptual Speed Subtest		
		Sum of Squares	Estimate of Variance	F	Sum of Squares	Estimate of Variance	F
Total	359	3301.598			4171.323		
Between groups	23	345.198	15.009		307.990	13.391	
Within groups	336	2956.400	8.799		3863.333	11.498	
Between replications	14	247.306	17.665		175.323	12.523	
Residual	322	2709.094	8.413		3688.010	11.453	
<i>Between Variables:</i>							
Between sex groups	1	40.669	40.669	4.834	21.511	21.511	
Between sibling's sex groups	1	66.736	66.736	7.932	16.900	16.900	
Between ordinal- position groups	1	3.025	3.025		94.045	94.045	8.211
Between spacing groups	2	47.540	23.770		3.406	1.703	
<i>First-order Interactions:</i>							
Subject's sex—sibling's sex	1	.336	.336		.044	.044	
Subject's sex—ordinal position	1	68.469	68.469	8.138	.544	.544	
Subject's sex—spacing	2	29.105	14.553		64.338	32.169	
Sibling's sex—ordinal position	1	8.403	8.403		2.844	2.844	
Sibling's sex—spacing	2	8.905	4.453		44.816	22.408	
Ordinal position —spacing	2	.649	.324		1.204	.602	
<i>Second-order Interactions</i>							
Subject's sex—sibling's sex—ordinal position	1	2.669	2.669		.278	.278	
Subject's sex—sibling's sex—spacing	2	28.272	14.136		10.772	5.386	
Subject's sex—ordinal position—spacing	2	3.839	1.920		2.072	1.036	
Sibling's sex—ordinal position—spacing	2	21.905	10.952		.505	.252	
<i>Third-order Interaction:</i>							
Subject's sex—sibling's sex—ordinal position —spacing	2	14.676	7.338		44.711	22.356	

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TABLE 8

ANALYSIS OF VARIANCE OF THE AGE QUOTIENTS FOR THE
QUANTITATIVE AND SPACE SUBTESTS OF THE
THURSTONE PRIMARY MENTAL ABILITIES TEST

Source of Variance	df	Quantitative Subtest			Space Subtest		
		Sum of Squares	Estimate of Variance	F	Sum of Squares	Estimate of Variance	F
Total	359	4804.492			5498.975		
Between groups	23	358.759	15.598		216.308	9.405	
Within groups	336	4445.733	13.231		5282.667	15.722	
Between replications	14	369.075	26.363		189.767	13.555	
Residual	322	4076.658	12.660		5092.900	15.816	
<i>Between Variables:</i>							
Between sex groups ...	1	16.900	16.900		.136	.136	
Between sibling's sex groups	1	44.100	44.100		14.803	14.803	
Between ordinal- position groups ..	1	4.900	4.900		10.336	10.336	
Between spacing groups	2	21.542	10.771		23.267	11.634	
<i>First-order Interactions:</i>							
Subject's sex—sibling's sex	1	7.511	7.511		.069	.069	
Subject's sex—ordinal position	1	30.044	30.044		15.625	15.625	
Subject's sex—spacing ..	2	17.716	8.858		16.422	8.211	
Sibling's sex—ordinal position	1	1.600	1.600		5.625	5.625	
Sibling's sex—spacing ..	2	8.149	4.075		25.755	12.878	
Ordinal position —spacing	2	2.150	1.075		12.356	6.178	
<i>Second-order Interactions</i>							
Subject's sex—sibling's sex—ordinal position	1	1.878	1.878		1.225	1.225	
Subject's sex—sibling's sex—spacing	2	24.105	12.052		5.955	2.978	
Subject's sex—ordinal position—spacing ..	2	7.372	3.686		62.066	31.033	
Sibling's sex—ordinal position—spacing ..	2	110.516	55.258	4.365	17.266	8.633	
<i>Third-order Interaction:</i>							
Subject's sex—sibling's sex—ordinal position —spacing	2	60.276	30.138		5.403	2.702	

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TABLE 9
ANALYSIS OF VARIANCE OF THE AGE QUOTIENTS FOR THE
TOTAL TEST—THURSTONE PRIMARY MENTAL ABILITIES TEST

Source of Variance	df	Sum of Squares	Estimate of Variance	F
Total	359	2915.531		
Between groups	23	209.398	9.104	
Within groups	336	2076.133	8.054	
Between replications	14	184.824	13.202	
Residual	322	2521.309	7.830	
<i>Between Variables:</i>				
Between sex groups	1	.803	.803	
Between sibling's sex groups	1	38.025	38.025	4.856
Between ordinal position groups	1	30.625	30.625	3.911
Between spacing groups	2	21.706	10.853	
<i>First-order Interactions:</i>				
Subject's sex—sibling's sex	1	.803	.803	
Subject's sex—ordinal position	1	18.225	18.225	
Subject's sex—spacing	2	23.438	11.719	
Sibling's sex—ordinal position	1	2.669	2.669	
Sibling's sex—spacing	2	12.816	6.408	
Ordinal position—spacing	2	.716	.358	
<i>Second-order Interactions:</i>				
Subject's sex—sibling's sex—ordinal position	1	.025	.025	
Subject's sex—sibling's sex—spacing	2	12.771	6.386	
Subject's sex—ordinal position—spacing	2	3.049	1.524	
Sibling's sex—ordinal position—spacing	2	23.872	11.936	
<i>Third-order Interaction:</i>				
Subject's sex—sibling's sex—ordinal position—spacing	2	19.855	9.928	

male sib score higher than those with a female at all spacings, the subgroup differences are significant only among first-borns at the two-to-four-year spacing and at both ordinal positions when the sibs differ in age by four to six years. No significant relations between verbal score and any of our variables are noted at the closest spacing, the most conspicuous differences occurring when the sibs differ in age by two to four years.

With all the comment there is in the psychological literature about the greater verbal skills and interests of girls (6, 20, 23, 28, 29, 36), we were surprised by our finding that first-born boys tend to excel girls in the Verbal Test and furthermore that children with a male sib tend to score higher than do those with a female sib. It is true that there are many studies which inform of no consistent sex differences in performance on tests of vocabu-

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lary, and other language and reading skills (1, 5, 12, 24, 27, 30), and some in which boys are reported superior to girls (8, 13). That our boys do better on the Verbal Test which is heavily saturated with Thurstone's Factor V (Verbal Meaning) confirms Hobson's (13) finding that boys score higher than girls in V. While Havighurst and Breese (11) in a population of thirteen-year-olds noted no sex difference in performance on the V factor tests, both of these authors and Hobson agree that girls tend to score higher than boys do in W (Word Fluency). The hypothesis that girls tend to be more fluent and boys more understanding of word meanings enables us to reconcile some of the apparently contradictory findings mentioned above.

It is possible that if a child has his parents' undivided attention for more than two years before the sib arrives and at a time when he is making most rapid progress in acquiring speech that he will be relatively more influenced by their verbal and intellectual stimulation than one would be whose sib follows close on his heels. There is evidence that parents talk to and instruct their second-borns less than they do to their first-borns (Lasko, 16). Hence, one might expect first-borns, especially at the wider spacings, to score higher on the Verbal Test than second-borns. But then, if parental stimulation is important, why only in the case of males should our first-borns excel seconds conspicuously? Since the test content seems unlikely as an explanation of the sex differences we observed, because of the pattern of the group means, and since a marked sex difference is not noted at both ordinal positions, we are led to an explanation of our results in terms of the greater range of experience which boys have because of their natures and social treatment. They are very active and get around more on their own (10, 17). This experience we think tends to increase vocabulary and understanding of word meanings.

There is evidence, too, that first-born boys are shown special devotion by their mothers (Sears *et al.*, 25). This attention expressed in part in much instruction and mature verbal stimulation may result in a relatively large word understanding for the boy. Since, furthermore, the influence of the male sib is about equal at both ordinal positions, we gain support for the hypothesis that the male is a more stimulated and stimulating creature than is the female. A brother alerts his sib more, either through the jealousy he excites, his challenging or the experience extension he provides, than does a sister and this results in enriching the word understanding of the sib. We have evidence that at the middle spacing, when the sex and sib-sex differences are the greatest, that the first-born males tend to be relatively jealous, quarrelsome, exhibitionistic, loud and insistent on their rights, conditions which should make the males a challenge to the sib as well as serve as evidence that they are themselves high strivers. At the wider spacings those children with a male sib are rated relatively high on competitiveness, leadership and tendency to insist on rights as compared with

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those subjects with a female sib, conditions which might throw light on the former's greater word understanding.

Perceptual Speed Test

In the total population, ordinal position is the only variable significantly related to score on the Perceptual Speed Test (Tables 4 and 7), first-borns showing themselves consistently less discriminating than second-borns. At the under-two-year spacing the girls score significantly higher than do the boys but when the sibs differ more in age there are no sex differences to be noted. At the widest spacing those children with a brother excel, on the average, those whose sib is a female.

The second-born, we suspect, though he receives less verbal stimulation and instruction from his parents than the first-born, is challenged in a concrete way more by the sib than is the first-born. The duration of the interaction with the sib is also longer for the second-born. Some of the first-borns at the widest spacing had had a sibling for only six months when they were tested and so can be expected to be more like an only child. The challenge given the second-born by his older sib makes the former more observing and alert to details. The girl, who is less aggressive than the boy and has to hold her own, perhaps, by being more observant, if her sib is very near in age and ability, needs probably to be particularly attentive to details in order to defend her interests, because her competitive sib has much contact with her, whether he is older or younger. At the wider spacings the girl may be less alerted because her common interests with and her contact with her sib is less. Also if the sib is a girl and greatly different in age, she may not be particularly stimulating because she, as a female, is relatively more passive than a brother. It is possible, too, since boys tend to receive more attention from the mother than do girls, that jealousy is a part of the alerting mechanism that makes children whose sibs are males more discriminating or attentive to perceptual details.

Quantitative Test

There is only one significant relation between score on the Quantitative Test and the variables studied, namely, the interaction between sib's sex, ordinal position and spacing (Tables 5 and 8). At the two-to-four-year spacing the first-borns with a male sib score higher than those with a female sib. Among second-borns none of the sib's-sex group differences are significant. The variable, sib's sex, in the total group shows an almost "significant" relation. Again it is the child with a male sib who scores higher.

What interests us is that the sex difference is not significant, since boys are alleged to be more mathematically inclined than are girls (3, 4, 12, 24, 35). We have no explanation for our results, except possibly that of the greater alerting achieved by a male sib, especially for his sister. This mechanism has been mentioned earlier. Perhaps a vigorous, charming, two-to-five

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year old male sib would stimulate the jealous older child (especially a sister) to keep track of things, e.g., to learn to count in order to insure getting a just share. The Quantitative Test is much concerned with counting and vocabulary for quantitative relations. In counting and routine computation, girls generally are reported to do as well as boys (3, 11, 12, 13, 24). Perhaps males would have done better than females had the Quantitative Test included more tasks of a problem-solving type, since there is some evidence that boys excel in problem-solving (3, 4, 12, 24).

Space Test

Space Test scores show no significant relations in the case of total population with any of our independent variables (Tables 5 and 8). This was a surprise to us, as findings generally, though no subjects as young as ours have been studied, indicate that males excel in whatever it is that space tests measure (7, 11, 13, 18, 22, 26). At the under-two-year spacing, however, the interaction between child's sex and ordinal position is significant. Among second-borns, girls score higher than boys, whereas among first-borns the reverse obtains, the sex differences here being small. We have no explanation, in which we have much confidence, to suggest for our finding. Perhaps second-born girls, competing vigorously with their slightly older brother, are not only more observant generally (see Perceptual Speed Test) but also more attentive to spatial relations.

Total Test

Sib's sex and ordinal position, as might be expected from the relations noted in the subtests, are related significantly to the total performance on the Primary Mental Abilities Test (Tables 6 and 9). Second-borns excel first-borns and those with a male sib do better than do those with a female sib. The finding that second-borns score higher than first-borns is congruent with the finding of Thurstone and Jenkins (32, 33) and of Willis (34) and is out of line, possibly, though our instruments differ, with that of Hsiao (14) and Jones and Hsiao (15). That the possession of a male sib seems to influence performance on the test has, as we have already suggested, made us wonder, especially since males themselves do not necessarily excel females. As explained earlier, we think the vigorous, aggressive, competitive male makes his sib more alert than does the more passive female—i.e., keeps the sib on its toes. It isn't that the male has greater skill or knowledge but rather that he, by the challenge he presents, stimulates or alerts his sib more than does a girl. Jealousy of him because he tends to be favored by his mother may also spark the alerting.

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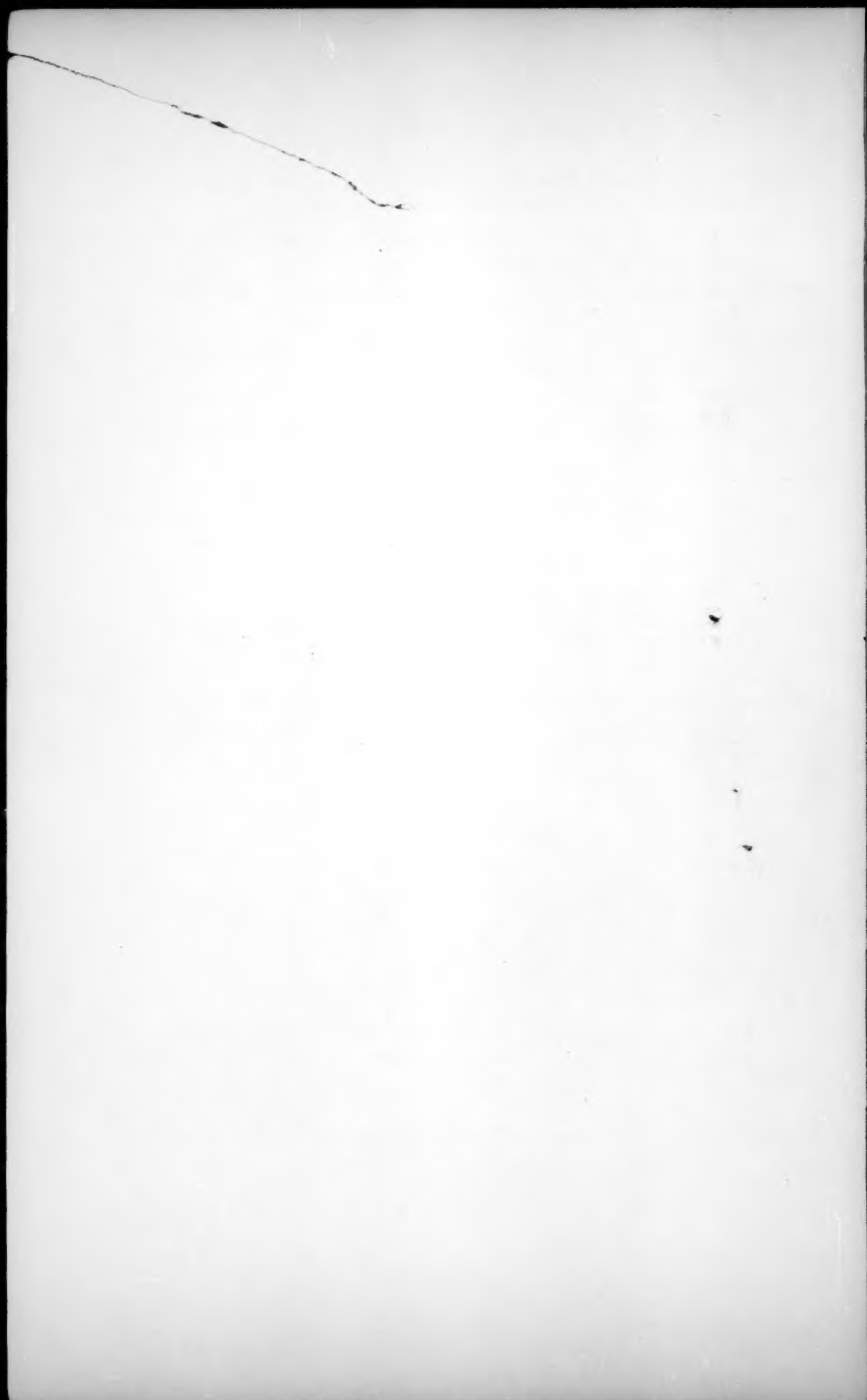
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CHILD REARING AND THE CHARACTER STRUCTURE OF THE MOTHER¹

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The purpose of this study was to test the hypothesis that the rearing of a young child, viewed as socialization, is primarily an expression of the mother's character structure² as it is integrated into the maternal role and as the mother interacts with the child in that role rather than the result of specific rearing practices and techniques.³ A methodology was developed using interdisciplinary concepts of social role and social interaction to explore the relative effect of these two sets of influences. The child's response is studied first in terms of his interaction with the "total mother person" and, second, as he reacts to the mother's rearing techniques. Although the child is subject to other influences, only the mother is considered here since she is the focal parent in relation to rearing the young child.

The study indicates that evaluations of child rearing practices are of little value unless understood as aspects of a dynamic process of socialization dependent on the social interaction of those individuals concerned. This is of importance for a more accurate assessment of acculturation and for preventive mental health and research programs. The hypothesis also offers some explanation of the wide variations in child rearing and child adjustment within a cultural subgroup, as revealed in previous studies (3, 6).

CONCEPTUAL FRAMEWORK

The family is not viewed as a closed system, but as interdependent with other societal institutions. It is a group with a history of its own as well as a "unity of interacting personalities each with a history (2, p. 6)." Continual

¹ This study was undertaken as one aspect of a larger study on "Family Diagnosis" being conducted by Dr. Nathan W. Ackerman, Assistant Clinical Professor of Psychiatry, Columbia University. The present report is an abstract of a master's thesis in the Sociology Department at Columbia University. The author wishes to express her gratitude to Dr. Ackerman for his many suggestions and criticisms.

² The biological component in maternal behavior is not excluded, but the emphasis here is mainly on maternal character.

³ Talcott Parsons states that "... the presumption is that the specific details of child training practice are likely to be primarily significant in their capacity as expressions of the attitudes of the socializing agents, rather than through their independent intrinsic effects. It seems probable that the strong emphasis on the latter in some circles has been colored by seeing the socialization process in terms of reinforcement theory of learning alone without reference to the processes of interaction in roles. . . ." (5, p. 215).

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modifications of the group and its members derive from the multiple interactions of societal members as they fulfill their ascribed and achieved social roles.

A comprehensive study of social interaction should include the various levels on which interaction occurs. On one level are the interactions of the individuals and their role behavior in the specific group situation, as well as the dynamics of the group as a unit. On another level are the underlying interactions: first, the meaning—unconscious, symbolic and real—which the individual himself feels and, second, the meaning which he attributes to other individuals as he interacts with them. Psychoanalytic concepts of underlying attitudes, motives and mechanisms must be added to the descriptive features of anthropological study and the sociological concern with human interaction on the behavior level.

Character structure, part of personality, is defined here as the relatively fixed sum total of habitual attitudes developed as reactions to life situations which determine habitual reactions to the world and the individual's socially oriented behavior. Through a process of accommodation to the expectations assigned to roles, modifications of social roles occur. The reciprocity, characteristic of social roles, the clarity of cultural definition of role expectations, and the degree of success of integration of character traits to meet role requirements will determine the degree of achievement in that role. It is the character structure which determines perception of the role, ability to reciprocate, and ability to integrate traits and to meet real and perceived role requirements. The mother's character structure should then provide the clues to her maternal behavior and conduct with the child.

Socialization is viewed as a process of mutual interaction between the person socialized and the socializing agent, in which each is ascribed a role which includes expectations of behavior (5, p. 208). The processes and content are structured by the overtly accepted culture and sub-culture patterns of the family in which the goals are implicit. In addition, patterns of interaction of the two parents as parents and as marital partners, as well as the child's reaction to his parents, affect total family interaction and individual role behavior. The responses of the child become the indicia of his adaptation to socialization and hence to his environment.

SUBJECTS AND SOURCE OF DATA

The population studied was 25 Jewish, urban, lower middle-class families selected at random at a psychoanalytically oriented mental health clinic and nursery school.⁴ The mean age of the 16 boys and 9 girls at referral was 36 months; the range was from two to six years. All were first children. The mean age of the fathers and mothers at birth of child was 33 years and 28 years respectively. All fathers were either professional or white collar

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workers with an average income of \$4200 a year. More than half the parents were college graduates and only one did not graduate from high school.

The data used derive from a series of intake interviews with mother, father and child by a psychiatric case worker, psychological tests such as Rorschach, TAT, etc., individual therapy interviews with family members, group therapy sessions in some cases, nursery teacher evaluation and observation, and analysis of families at staff meetings. The author made home visits to 19 families focused on family interaction patterns and evaluation of environmental factors.

PROCEDURE

Although the mother's role behavior depends on her character structure, the child does not react to the character structure in isolation. The principal determinant of his response is his *total* perception of the mother. This totality which the child selectively perceives according to his needs and to which he responds is called here the "total mother person." A schedule was used to analyze both underlying dynamics and overt behavior of (a) the "total mother person," separated into its component variables of character structure pertinent to fulfillment of the maternal role, integration of these traits into that role, and maternal conduct; and (b) the child's response as a measure of his adjustment to the socialization process. Secondly, three rearing practices, weaning, feeding, and toilet training, were analyzed and scored for each case.

Because the mother is the primary influence and frequently the mediator of other influences, these other influences on the child are conceptualized in the schedule in terms of the mother's conduct. The degree of the mother's ability to shift her behavior in harmony with the child's development and actual events must also be considered. This means a genetic approach is one prerequisite for analysis.

Another prerequisite is a knowledge of the complex of the mother's underlying attitudes and motivations for which multiple criteria are essential. The mother's character structure, its uniqueness already established at the time of the child's birth, may be described as the independent variable.

The maternal role becomes the frame of reference of the child's motive patterns as he interacts with his mother and a social norm for perceiving her (4). The mother's character structure determines her ability to invest her inner self in the role and to respond to her perception of role requirements and cultural pressures to meet these requirements.

The mother's patterns of interaction in her actual conduct with the child are viewed as a series of influences on the child. In this context, methods of weaning, feeding and toilet training are rated on the degree of their adaptation to the needs of the child at each stage of his development. Because of their widely accepted importance, the three areas of social discipline are

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correlated separately with the child's total adjustment. Of significance here is the average behavior of the mother in each area as reported by her and also as professionally observed.

The child's response to socialization is the dependent variable. It will indicate the degree of success of his total adjustment and will provide some indication of his feelings and attitudes toward his mother. To test the hypothesis, his response is first related to the total maternal socialization and then to the specific rearing techniques used by the mother. The criteria for analysis of the child's response rest on the degree of satisfaction of his basic needs and his overt response and reactions to his mother's behavior. The success he will achieve in learning to take the role of the other will depend on the degree of satisfaction of fundamental needs.

The following schedule is presented in some detail because of its importance to both the methodology and content of the study.

Schedule for Analysis and Scoring of the Data

I. Total Mother Person

- A. Mother's character structure (underlying attitudes and dynamics).
Average of items equals adequacy of adjustment.

1. Image of self (Rate: extremely confused—little or no confusion)

Indicators: Degree of instability of self as child; successful identification, denial of insecurity as child, compensatory security. Degree of conflicted sex identification; rejection of men and female role, anxiety re sex, child birth, having children. Degree of fulfillment of self; satisfaction with self, fulfillment of goals re marriage, love, achievement, discrepancy between realistic and fantasy goals, strength of compensatory mechanisms.

2. Mastery of self (Rate: unsuccessful—successful)

Indicators: Degree of adequacy of self image, self understanding, self control, submission-dominance behavior as need to control others or be controlled, fear of aggressiveness, belligerence, preoccupation with hurting and being hurt; ability to assert real self, utilize capacities; accompanying anxiety as evasion, indecision, depression and compulsiveness.

3. Interpersonal relations (Rate: very poor—good)

Indicators: Degree of capacity for closeness and empathy, identification, rapport, detachment, need for control of aggression, hostility, dependency, need to control others, preoccupation with fear of injury, perception of reality.

4. Affects. Average of following items.

a. Quality of affects (Rate: poor quality—good quality)

Indicators: Degree of spontaneity, depth, stability, appropriateness, flexibility.

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- b. Range of emotional interests (Rate: narrow range—wide range)
Indicators: Degree of constriction of affects, capacity for pleasure (absence of danger), absence of pleasure (pain) as defense against punishment.
 - c. Expression-control of emotions (Rate: inappropriate—appropriate)
Indicators: Degree of guilt, fear of injury to self and others, lack of control or over-control, suppression and inhibition.
 - 5. Rigidity-flexibility (Rate: rigid—flexible)
Indicators: Degree of ability to adapt to people and life situations, anxiety for which rigid control is necessary.
- B. Integration of character traits to meet maternal role requirements (overt and underlying attitudes). Average of items equals ability to integrate into role.
- 1. Integration of self in maternal role (Rate: unsuccessful—successful)
Indicators: Degree of inferiority of image of self as mother, confidence in ability to carry out maternal function, avoidance or assertion of self in role, fear of loss of control of hostile urges, guilt (especially with respect to underlying rejection of child), anxiety, aggression.
 - 2. Interpersonal relations. Average of the following items.
 - a. Togetherness with child (Rate: insufficient—sufficient)
Indicators: Degree of ability to meet child's need for love and physical closeness, narcissism in affective identification, empathy, respect for self of child, realistic accommodation, ability to separate from the child positively, capacity for pleasure in child.
 - b. Control of emotional urges (Rate: inadequate—adequate)
Indicators: Degree of ability to control anxiety and hostility, over-control or lack of control, control in relation to self as threat to child or to child as threat to self.
 - 3. Rigidity-flexibility (Rate: rigid—flexible)
Indicators: Degree of ability to accommodate self to child and to modify behavior to meet child's needs.
- C. Maternal conduct (observed and overt conduct in care of child). Average of items equals degree of quality of child care.
- 1. Emotional attitudes (Rate: inadequate—adequate)
Indicators: Degree of consistency, rejection or over-protection, affection, warmth, emotional accommodation to child, understanding of needs, satisfaction with child's response, anxiety, rationalization, intellectualization, respect for self of child.
 - 2. Social discipline. Average of following items.
 - a. Discipline of child's overall behavior
(Rate: not adapted to child's needs—adapted).

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Indicators: Degree of need to dominate child, rigidity of standards of behavior, obedience requirements, positive adaptation to child as opposed to expediency, ability to limit and control child suitably, consistency, appropriateness of punishment-reward system, ability to separate realistically from child.

- b. Discipline of primary drives (rearing practices) (Rate on average of the following: not adapted to child's needs—adapted)

(1) Toilet training

Indicators: Degree of rigidity of routine, need to control child's body, use of coercion or extreme permissiveness, consistency, appropriateness of punishment-rewards, ability to modify methods, adaptation to child's maturational level.

(2) Feeding

Indicators: Method and timing of weaning— use of force, abruptness, arbitrariness, exaggerated permissiveness, adaptation to maturational level. Feeding— degree of variety and quantity of food, coerciveness or permissiveness, rigidity of routine, meeting of child's hunger needs.

4. Relation of maternal conduct to culture patterns of child rearing and maternal role

(Rate: rigid or non-compliance—realistic compliance)

Indicators: Degree of deviancy or conformity to culture patterns, agreement between family aspiration and culture.

5. Maternal conduct measured against conscious ideals for conduct

(Rate: inability to carry out concepts—ability)

Indicators: Degree of anxiety re discrepancy between conduct and concepts re: behavior of child, satisfaction of child's needs, social discipline, punishment-reward system, social conformity, child centeredness of home, image of child.

6. Influence of child's response on conduct (Rate: no modification of conduct to meet child's need—modification)

Indicators: Degree to which mother shifts conduct, anxiety and guilt, rigidity of standards, child's need to force mother to care for needs, child's demands for closer contact with mother, and mother's realistic submission to child's needs.

7. Influence of father on maternal conduct

(Rate: opposition to conduct—positive support)

Indicators: Degree of father's approval of child's behavior, father's submissiveness to mother, parental agreement on child rearing, division of responsibility in family for child.

8. Influence of family group patterns on conduct

(Rate: negative influence—positive influence)

Indicators: Degree of intactness and integration of group, satisfaction of needs of members, good rapport, unity, common goals and

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standards, isolation of family group, harmony or disharmony influenced by conflict and dominance-submission patterns.

II. *Child Adjustment* (response to socialization) Average of items equals degree of adequacy of adjustment.

A. Security and satisfaction in togetherness with mother

(Rate: love needs not met—love needs met)

Indicators: Degree of pleasure in physical contact with mother, pleasure in feeding, sleep, degree of real closeness.

B. Reaction to separation from mother

(Rate: inability to separate—ability to separate)

Indicators: Degree of rejection of mother, anxiety as seen in need to cling to or avoid mother physically.

C. Manipulation or control of mother

(Rate: need to control—little or no need)

Indicators: Degree of need to force mother to meet needs, aggressiveness, resistance, over-assertion or lack of assertion in order to control mother.

D. Self assertion (Rate: unsuccessful self-mastery—successful)

Indicators: Degree of mastery of environment, dependence or submission, need to control mother, need to rebel, ability to grow (natural maturation), ability to identify with parents and to socialize.

E. Overt response to social discipline (Rate on average of following: resistance—positive acceptance)

1. Social behavior

Indicators: Degree of ability to adapt to environment, inappropriate passivity or aggressiveness, hyperactivity, over-control, excessive crying, temper tantrums, need to control or punish mother, anxiety, spontaneity, maturity according to age level.

2. Rearing practices

a. Weaning

Indicators: Degree of compliance, need to cling to bottle, satisfaction of sucking needs, need to control or punish mother.

b. Feeding

Indicators: Degree of enjoyment of food, need to punish or control mother, degree of compliance, refusal of food or over-eating, demands to be fed.

c. Toilet training

Indicators: Degree of compliance, self training or no training, need to control or punish mother as retention, refusal to be trained.

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F. Child's problems in response to socialization (Rate: very severe—mild)

Indicators: Degree of intensity and number of problems, as ability to form relationships, withdrawal, aggression, retardation of development (speech, training, etc.), social skills as training, feeding responsibility; need to control or punish parents, sibling rivalry, spontaneity, dependence, fears.

SCORING

The scoring of category items in the schedule is based on a relative rating of items to a base of extremes in either direction. This is due to the impossibility of determining how much of a given item or what degree of its presence or absence is necessary for a hypothetically successful fulfillment of social roles and adjustment of the individual to his environment. What is known is that a minimum degree or almost no presence of required items consistently leads to poor social and emotional adjustment and failure to fulfill social role requirements adequately. At the other extreme, when there is sufficient presence of or success in these items, the adjustment of the individual is a positive one with concomitant success in his social roles. This does not imply ideal adjustment.

Scoring on a scale provides a rough index for purposes of comparison and summarization. Because of the selective character of the sample, a scale from 1 (low) to 5 (high) was used, rather than a simple dichotomy. The measures have not been sufficiently refined to be strictly independent and, in some instances, overlap. After each item in the schedule was rated for each case, a total score for each category was obtained by averaging the item scores. Items were considered to be equally weighted. The indicators were utilized as bases for judgments. When the categories were totaled and averaged, a single score was obtained for the "total mother person" and also for the child. Score values were determined as follows:

<i>Score Value</i>	<i>Definition</i>
1	Inadequate for adjustment.
2	Adequate for minimum adjustment.
3	Sufficient for somewhat better than minimum adjustment.
4	Adequate for somewhat less than reasonably good adjustment.
5	Adequate for reasonably good adjustment.

The scoring of the specific rearing practices is also on a relative basis in terms of the degree of adequacy in meeting the child's needs and is a measurement of observed behavior. Generally accepted pediatric and psychiatric concepts of adequacy were given high score values (1, 7). The degree of deviation from this in terms of timing and method used were the bases for lower score values. The following is a definition of score values on the rearing practices.

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<i>Score Value</i>	<i>Definition</i>
Feeding:	
1	Neglect of child's hunger needs or forced feeding.
2	Rigid or irrational overconcern of mother with regard to child's food intake.
3	Some irrational concern but moderate ability to meet child's hunger needs.
4	Ability to meet child's needs for most part, some occasional concern.
5	Adequate satisfaction of child's hunger on basis of needs.
Weaning:	
1	No weaning or abrupt weaning.
2	Inconsistent training or coercion, very late (after 36 mos.) or very early (before 6 mos.).
3	Self weaned (mother makes no attempt to wean), not sufficiently gradual.
4	Less gradual than score value 5, etc.
5	Gradual weaning between about 9 and 15 months.
Toilet Training:	
1	Coercion or no training.
2	Inconsistent training, exaggerated concern and discipline, very late training (after 24 mos.).
3	Self trained (mother makes no attempt to train), milder forms of score value 2.
4	Mild concern or inconsistency but gradual.
5	Gradual training: Bowel 1 to 2 years; Urine 1½ to 2½ years.

The 25 cases were rated by the author. As a rough check, independent ratings were first made on six cases by two qualified persons. The result was an average of 87 per cent agreement on six cases between the three sets of ratings on mean scores for the categories. In no case did disagreement on item scores exceed one point on the scale. It was not possible at the time to secure independent ratings for all cases.

ANALYSIS OF THE DATA

As might have been anticipated by the selective quality of the sample, the large majority of subjects were characterized by a minimal level of adjustment. Table 1 shows that the large majority of cases in all categories, except the rearing practices, received mean scores lower than 3.0. On the basis of the schedule analysis, this indicates that most of the mothers were poorly

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TABLE I
SUMMARY SCORES FOR THE 25 CASES

Category	FREQUENCY OF SCORES IN INTERVALS					Mean Score
	0-1.0	1.1-2.0	2.1-3.0	3.1-4.0	4.1-5.0	
Total Mother Person	4	16	3	2	0	1.6
Character Structure	8	12	3	2	0	1.6
Maternal Role	11	9	3	2	0	1.5
Maternal Conduct	1	18	4	2	0	1.8
Child Adjustment	1	10	11	3	0	2.1
Three Rearing Practices ..	1	0	11	8	5	3.1

adjusted women unable to fulfill the maternal role or meet the child's basic needs. Concomitantly, the child's adjustment was also poor. Measured on the specific rearing practices, however, the majority of mothers functioned in a reasonably adequate manner according to widely accepted standards.

For the character structure alone, the scores indicated poor adjustment and inability to meet maternal role requirements. More mothers scored low on the quality of their interpersonal relations in the maternal role than on any other item in the total schedule, indicating insufficient togetherness with the child and inadequate control of emotional urges, both necessary for adequate maternal functioning.

Scores on the third category for the "total mother person" are widely distributed with greater variation between items than found in the first two categories. The group as a whole were slightly more successful in their actual conduct than their character structure or ability to meet maternal role requirements implied. Slightly higher scores on family group patterns of interaction, influence of the child's response and the father indicate that, for the group as a whole, these factors operated to help the mother to be more effective in her maternal conduct than as an individual. The complete case records of the families of these mothers were re-examined and compared to the remaining sample. It was found that when maternal conduct was unexpectedly better than anticipated on the basis of the mother's character structure, one or more common factors were present. The father was the better adjusted of the two parents (judged by psychiatric interviews and projective tests), the parental and marital relationships were more stable and suffered from less interpersonal conflict than in the other families and the family group was less isolated from the community. Highest score values among items for the "total mother person" were obtained on the degree of realistic compliance to prevailing culture patterns of child rearing, indicating the relative absence of overt deviancy in this group.

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The children's responses were more widely distributed on the scale. On the whole, these children had little security or satisfaction in emotional "togetherness" with their mothers and needed to manipulate and control in an attempt to satisfy basic needs. Unlike the other two variables, the scores for the rearing practices show absence of clustering on the scale, with the majority of the cases at the three higher score levels.

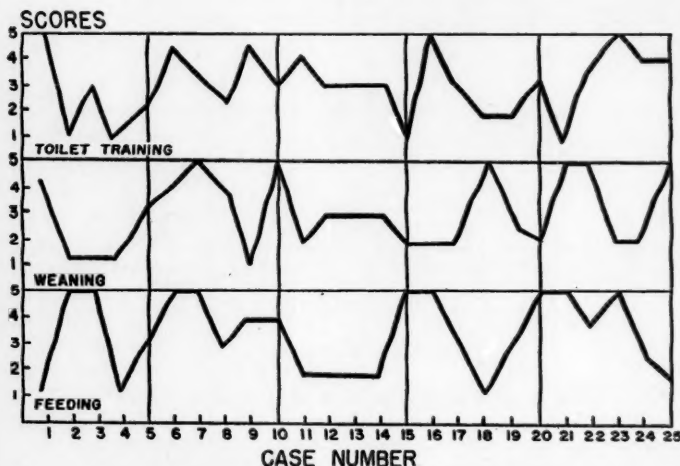


FIGURE 1—Maternal Conduct in Three Child Rearing Practices.

Figure 1 shows that there are wide differentials in the rearing practices between cases and between the variables for the same case. The lack of consistency between the three rearing practices is apparent. Frequently the mother conducts herself adequately on one or two items but fails completely on the third. The evidence, in most cases, is that the mother did not adopt the same patterns of behavior in the three areas of training. Examination of the original data in the case records shows that such diversity in the mother can be traced to her underlying emotional needs which she expressed in an appropriate area of social discipline. In most instances, the child's response in terms of overt compliance or resistance to the rearing practices does not seem to relate either to the specific techniques used or to his total response to the "total mother person." In most cases, there is a complete lack of consistency of response in the three areas of social discipline analyzed.

The close relatedness of the mean scores of child adjustment and adjustment of the "total mother person" is illustrated in Figure 2. The rearing

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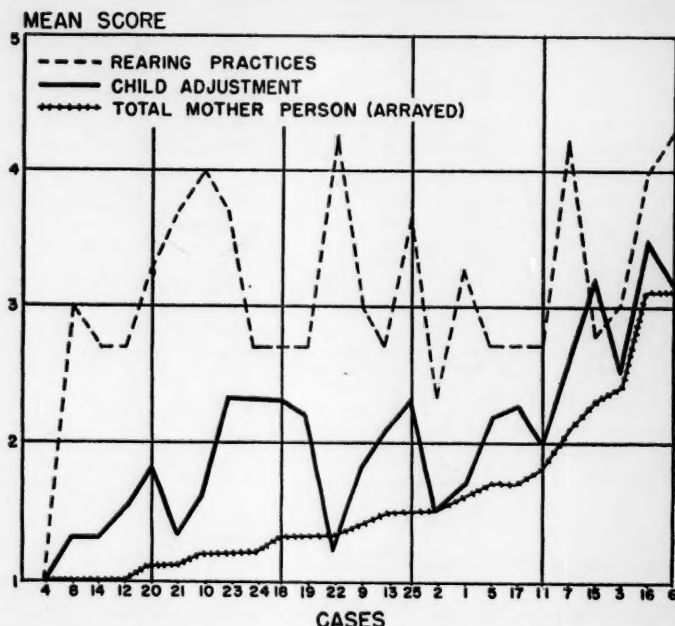


FIGURE 2—Mean Scores of the "Total Mother Person," Child Adjustment and Rearing Practices for Each Case.

practices, however, do not follow this curve and, with the exception of one case, vary without apparent relationship to the other two variables.

In Table 2 are the coefficients of rank correlation which support the hypotheses tested. Of principal interest here are the highly significant correlations of the "total mother person" and its principal determinant, her character structure, with the child's adjustment. The ability to integrate character traits into the maternal role and maternal conduct are also significantly correlated with character structure (correlation coefficients of $+.82$ and $+.85$ respectively) and are therefore dependent on this more or less fixed component of the "total mother person."

On the other hand, there is an absence of correlation between the three rearing practices analyzed separately and the child's adjustment, indicating that the child's response is primarily the result of his total interaction with his mother as she fulfills the maternal role and her conduct in that role. This response, therefore, is basically dependent on the mother's character structure.

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TABLE 2

COEFFICIENTS OF RANK CORRELATION BETWEEN TOTAL MOTHER PERSON
AND ITS COMPONENTS AND CHILD ADJUSTMENT ($N = 25$)

	<i>Child Adjustment</i>
Total Mother Person .....	.75**
Character Structure .....	.80**
Maternal Role .....	.69**
Maternal Conduct .....	.93**

** Significant at .01 level.

SUMMARY

The results of this interdisciplinary study of 25 mothers and their first child of preschool age appear to support the hypotheses tested. The child's adjustment to socialization was significantly related to the "total mother person" and specifically to her character structure, but insignificantly related to the mother's specific rearing techniques, where the mother's conduct showed wide variation and inconsistency. This was traced to her own emotional needs and conflicts.

In the mother's social interaction with the child as she takes on the maternal role, she both consciously and unconsciously expresses her emotional needs and attempts to satisfy them. Her integration into the maternal role will depend on her perception of self and role and will influence the child's perception of her. It is also evident that the child is both sensitive and responsive to the unconscious attitudes of the mother as well as to her overt conduct. The quality of his adjustment is more dependent on his total interaction with his mother than on any specific aspects of social discipline.

This research points to the mother's character structure as an important causative factor in the wide variation in both child rearing and child adjustment within a cultural subgroup of our society. It is generally evident that increased insights may be obtained by a systematic investigation of socialization utilizing an interdisciplinary approach. In the areas of family study, preventive mental health and child guidance, rigorous analysis of social roles and social interaction on several levels, as suggested by this study, would provide a sounder basis for understanding the dynamics involved in socialization, for treatment and for prediction.

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